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NEW VENTURE EVOLUTION:
A RESOURCE MANAGEMENT PERSPECTIVE

CHARLOTTE PAUWELS

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Advisor: Prof. dr. Bart Clarysse

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DOCTORAL COMMITTEE

Prof. dr. Marc De Clerq
Ghent University, Belgium – Dean & President

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Ghent University, Belgium & Imperial College London Business School, UK – Advisor

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Prof. dr. Petra Andries
Ghent University, Belgium

Prof. dr. Annelies Bobelyn
Eindhoven University of Technology, the Netherlands

Dr. Robin De Cock
Ghent University, Belgium

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LIST OF PUBLICATIONS AND CONFERENCE PRESENTATIONS BASED ON THIS DOCTORAL RESEARCH

Forthcoming papers

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Conference proceedings

Pauwels, C., Clarysse, B. & Wright, M. (2013). Boundary Conditions of Business Model Dynamics: New Ventures in Nascent Markets. *Frontiers of Entrepreneurship Research (FER) proceedings.*

Working papers

Clarysse, C., Wright, M. & Pauwels, C. Business model pivoting in new ventures: a resource perspective. *Under review for Organization Science*

Pauwels, C. & Clarysse, B. How to win over employees' hearts and minds: building internal legitimacy

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Pauwels, C. (2014). Understanding the Process of New Venture Evolution in Nascent Markets. *Strategic Management Society Conference*, Madrid, Spain, September 20-23.

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Pauwels, C. (2015). How to win over employees' hearts and minds: building internal legitimacy. *Strategic Management Society Conference*, Denver, CO, October 3 – 6.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1

GENERAL INTRODUCTION

1. INTRODUCTION

New ventures are an important means by which new ideas are brought to life. They are core to the process of creative destruction and by exerting competitive pressure on prevailing businesses they drive improvements in productivity and prosperity. In short, the starting – and scaling – of new ventures is vital for innovation and economic growth (Miller & Bound, 2011). From the venture's perspective, its primary pursuit is to create value for itself and different stakeholders (Conner, 1991). Value is created when the venture provides greater utility for customers than its competitors, and thereby increases its owner wealth. However, in many cases new ventures fail to create value, because they lack the appropriate skills, capabilities and resources to do so (Teece, 2007). Research and contemporary examples show that, although growth is a desirable outcome for most new ventures, many new firms fail to grow, largely because of limited resources (Khaire, 2010). The specific features of organizational resources even have led researchers to suggest that "a new venture should pay more attention to its resources than to is competitive environment" (Das & Teng, 2000, p. 32).

1.1. Resources and new ventures

The study of resources has a long history in organizational research. Most prominently, this basic concern has surfaced in the resource-based view (RBV) of the firm (Penrose, 1959). This view suggests that a firm's resources provide the basis for value creation through the development of a competitive advantage (Wernerfelt, 1984). Its central position is that valuable and rare resources, which are hard to imitate and non-substitutable (VRIN characteristics), provide the firm with a sustainable competitive advantage (Barney, 1991a, 1991b). Although empirical work supports this core logic of linking VRIN resources to value creation (Crook, Ketchen, Combs, & Todd, 2008; Bradley, Aldrich, Shepherd, & Wiklund, 2011), the RBV requires further specification to fully explain differentials among new ventures' value creation potential. Merely possessing resources will not guarantee the development of a competitive advantage. To realize value creation, firms must accumulate, combine and exploit these resources. This means that the full value of resources is only realized when resources are *managed* appropriately (Sirmon & Hitt, 2003; Sirmon, Hitt, Ireland, & Gilbert, 2011). The focus of this dissertation therefore explicitly lies on the actions that managers take to create value from resources, i.e. the management of resources.

Also, not all resources are equally important in determining organizational outcomes, nor are they equally manageable. Different types of resources contribute in a different manner to a firm's sustainable competitive advantage (Sirmon, Gove, & Hitt, 2008). Barney (1991) defines resources as "all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness" (Barney, 1991, p. 101). He distinguishes between three main categories of resources: (1) physical capital resources, (2) human capital resources and (3) organizational capital resources. Another common categorization is the distinction between tangible resources, such as raw materials, technology, capital, a firm's plant and equipment etc. and intangible resources, such as skills, know-how, reputation, culture, experience, network etc. (a.o. Helfat & Peteraf, 2003; Khaire, 2010; Teece, 2007). While tangible resources are most easily identifiable, intangible resources, although less easy to delineate or quantify, are often considered to be more valuable and especially important to new ventures (Khaire, 2010). After all, new ventures are often not financially capable of incurring high capital costs to invest in tangible resources.

In this doctoral dissertation, the categorization introduced by Clarysse, Bruneel and Wright (2011) is used to distinguish between different types of resources. This categorization includes (1) financial, (2) human, (3) technological and (4) social resources. *Financial* resources concern all capital that is generated by the venture itself and/or obtained from external sources (such as banks, business angels, venture capitalists, government institutions...). In the beginning, new ventures are often financially constrained and have to rely on founder's money, money from friends, family (and fools?), or (pre)seed-money (f.e. grants, incubation investments, awards…) to get the venture off the ground. In later stages of development additional sources of capital become available, such as business angel and venture capital investments, bank loans, crowd funding etc. *Human* resources refer to the venture's team (founder(s) and employee(s)) and the knowledge, expertise and experience they bring with them. Human resources in new ventures are often confined to the founder(s) only, or a small team of founders and early employees. As human resources are regarded as representing the lifeline of small ventures, their know-how, experience and networks are critical assets to the venture's performance. *Technological* resources include such things as software, engineering know-how, manufacturing facilities, patents etc. (Danneels, 2008). Technological resources are often considered to be deployable for different purposes, in different ways, creating benefits for users in multiple domains. This idea - that technological resources are the most fungible resource category among the four identified - is quite firmly anchored in the resource-based view (Danneels, 2002, 2007; Gruber, MacMillan, & Thompson, 2008; Prahalad & Hamel, 1990). Finally, *social* resources comprise of partnerships, alliances, relationships and the like (Park & Mezias, 2005). For new ventures in particular, social resources provide important sources of knowledge acquisition and learning, and often provide access to other resources that would otherwise be beyond their reach (Yli-Renko, Autio, & Sapienza, 2001).

As an extension to the long established consensus about the role of resources and resource management as primary sources of a firm's sustained competitive advantage, more recent studies have reacted to the oversight of dynamism within the RBV, pointing to the co-evolution of a new venture and its resource base. Resource management is important throughout a venture's life, yet, different stages of the firm's life cycle (f.e. the pre-start up, founding and growth phase, see figure 1) may require the salience of particular resource management actions. This concern is explicitly addressed in the resource management framework developed by Sirmon, Hitt and Ireland (2007), which links value creation with the management of resources over time and addresses process-oriented managerial actions to achieve a sustained competitive advantage. The resource orchestration framework (Sirmon et al., 2011), which builds further on the resource management framework, suggests that the firm's life cycle is one of the three areas - in addition to breadth and depth of the firm - in which resources can be developed to achieve a sustained competitive advantage.

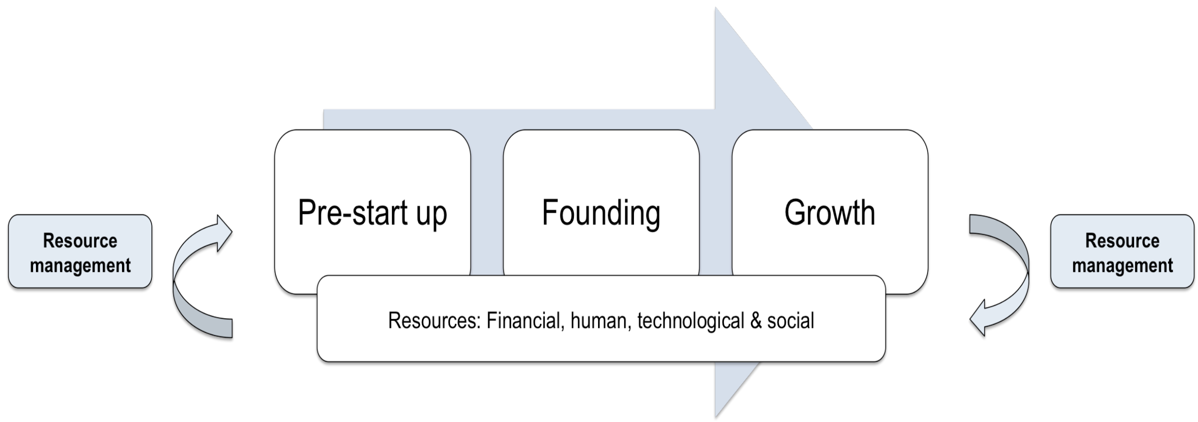

Figure 1: Resource management: dynamic perspective

1.2. Resource management and new venture evolution

In the earliest stages of a new venture's life, managers focus on designing a viable business model to delineate the way in which a certain business opportunity will be addressed. The structuring of resources is often put forward as the first accompanying step in new venture creation, as an organizational form has to be established to pursue the identified business opportunity. In the beginning, experimental resource allocation patterns are commonly undertaken, because of limited initial resources and limited power over other actors to access resources (Santos & Eisenhardt, 2009). Only after the venture is established and legitimacy is gained from stakeholders (such as customers, external investors, employees, public etc.), entrepreneurs will be able to engage in more deliberate resource-structuring activities, such as hiring and training employees to implement marketing, sales, and operations (Rutherford, Buller, & McMullen, 2003), protecting intellectual property (Jawahar & McLaughlin, 2001), and establishing alliances in order to acquire critical social resources (Miller & Friesen, 1984). The established resource portfolio then forms the basis for subsequent bundling and leveraging processes to form and exploit capabilities on which the firm's business model will operate. In later stages of development, the focus of the venture shifts to the acquisition and development of resources to spur further development and growth (Gilbert, McDougall & Audretsch, 2006; Lumpkin & Dess, 2001). Growth requires an entrepreneur to structure the organization with increasingly formalized procedures and managerial hierarchy, necessary to effectively manage a larger firm. However, as markets needs evolve over time, entrepreneurs also have to ensure a continuous fit between the firm's resource portfolio and its environment, which requires additional resource management processes. For example, when market needs change and customers start preferring a basic service at a lower price over of a unique service at a higher price, firms operating in this particular market will have to redesign their venture and (re)structure the resource portfolio in a way that helps them achieve efficiencies and maintain lower costs relative to competitors (Sirmon et al., 2011).

As different resource management activities are salient and focused on in different stages of a firm's life, it is relevant to explicitly distinguish between different life cycle stages, in order to have a complete understanding of a new venture's evolution and its chances to survival and growth. The central tenet of this dissertation corresponds with the important notion that resource management activities evolve over time and differ according to the stage of development of the venture. *The overall point of departure is the simple observation that there has been insufficient dialogue between new venture evolution and resource management.* Each of the three dissertation studies therefore focuses on resource management activities, particularly salient in a different stage of development.

1.3. Research gaps and questions

The aim of this doctoral dissertation is to gain a better understanding of how new ventures can successfully manage resources in different stages of development. Figure 2 provides a graphical presentation of the three studies included in this dissertation, whereby each study has different resource management activities as the focal point of examination. In the pre-start up phase, entrepreneurs need to acquire and structure resources in order to arrive at an organizational form that can execute an identified business opportunity (= focus of study 1). In the founding phase, entrepreneurs must identify, accumulate, and acquire resources that enable their firms to gain legitimacy, in order to establish viability in the market place (Miller & Friesen, 1984) (= focus of study 2). In the growth phase, after legitimacy is gained, the resource management processes should focus on scaling the firm's operations to achieve growth whilst incorporating sufficient flexibility to respond to environmental changes (= focus of study 3). The following paragraphs provide a brief summary of the research gap underlying each study and outline the specific research question addressed.

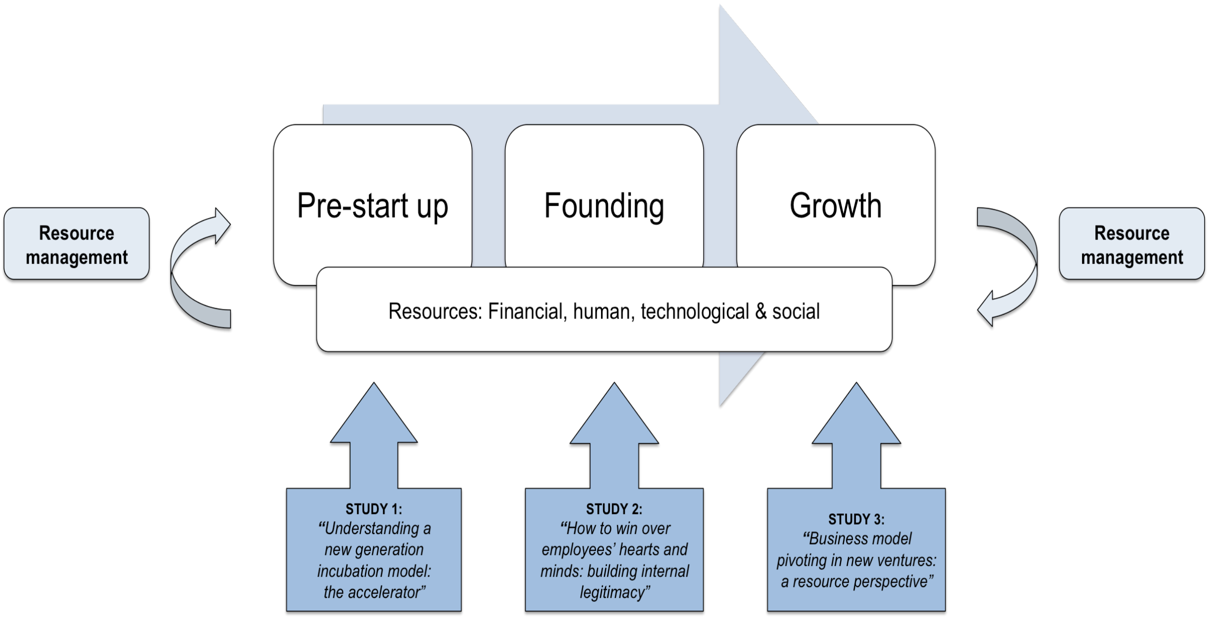

Figure 2: Overview of the three dissertation studies

1.3.1. Research question study 1: *"How do accelerators operate as a new generation incubation model?"*

The first study of the doctoral dissertation focuses on the pre-start up phase. In this phase, an idea emerges or an opportunity is spotted and entrepreneurs look for the right way to develop the idea or opportunity into a "real business". In order to assist in this process, different types of incubation mechanisms are widely established with the specific aim to stimulate or accelerate the new venture creation process. Incubation mechanisms operate with a particular incubation model. This is the "business model" used by the incubator to deliver the incubation services to start-up companies and create and capture value from them (Amit & Zott, 2001). Incubation models have evolved over the past years and continue to evolve into new generation incubation models (Bruneel, Ratinho, Clarysse, & Groen, 2012). However, theoretical insights about the specific features of these new generation incubation models and their impact on incubated ventures are scant (Aernoudt, 2004). As extant incubation literature is largely descriptive in nature, it seems to lack a theoretical lens to analyse and explain the heterogeneity among different incubation models (Hackett & Dilts, 2004). The first study therefore introduces the design lens introduced by Zott and Amit in their research about business model design as a useful theoretical framework and focuses on the accelerator as a new generation incubation model. The aim of the study is to explore the accelerator's specific characteristics and drivers, distinguishing it from existing incubation mechanisms. Through a multiple case design of 13 accelerators in Europe, the studies investigates *how accelerators operate as a new generation incubation model* and assist their start-up clientele in the seed resource management process.

1.3.2. Research question study 2: *"How do new ventures build up organizational legitimacy among their employees?"*

The second study of the doctoral dissertation focuses on the founding phase. In this phase, the liability of newness is a primary barrier for new ventures to acquire the necessary resources to start the business (cfr. below). Extant literature shows that organizational legitimacy plays a key role in overcoming this barrier by convincing resource providers to grant resources to the venture (Aldrich & Fiol, 1994; Sine, David, & Mitsuhashi, 2007; Zimmerman & Zeitz, 2002). Hence the second study's focus on how new ventures can achieve organizational legitimacy. The paper focuses on employees as the primary target audience to gain legitimacy from. Although human resources are considered as a particularly important resource category for new ventures, existing legitimacy studies seem to primarily focus on external resource providers (such as investors, customers, public, government…). Since we lack understanding of *how legitimacy from internal stakeholders (employees) can be gained*, the second study concerns an in-depth investigation of the internal legitimacy building process in a successful, innovative start-up, which was able to gain legitimacy from a particularly large number of highly qualified employees at an early age. The study unpacks the entire internal legitimacy building process and concludes about differences with external legitimacy.

1.3.3. Research question study 3: *"How can resource-constrained ventures successfully pivot their business model early in their life?"*

The third study of the doctoral dissertation focuses on the growth phase of a new venture. This phase is often characterized by evolving environmental conditions, which require the venture to change and adapt. In the early growth stages, a new venture often has to pivot its business model to arrive at the one that proves to be the key to success. Despite the importance of business model pivoting in the growth process of new ventures, research addressing *how new ventures can successfully do so, early in their life cycle*, is surprisingly scant. The resource management perspective offers a promising lens to understand the factors enabling or hindering business model pivots, but shows limitations for early-stage ventures in resource-constrained contexts. The third study therefore aims to extend the boundaries of the resource management framework towards a resource-constrained context, in which changes need to take place. To achieve this, the paper reports on a longitudinal study of a venture that went through two business model pivots, only one being successful. Building on the extended case study method, the two business model pivots are compared and conclusions are made about particular frictions in the resource structuring process during the first pivot, which ultimately led to the failure of the second pivot.

1.4. Research context and design

1.4.1. New ventures

This doctoral dissertation focuses on new ventures. I define new ventures as companies of six years old or younger. I focus on those ventures in particular that aim to grow and develop into successful, revenue-generating companies, distinguishing them from the so-called "lifestyle businesses". Lifestyle businesses do not strive for quick or ongoing growth but focus on earning sufficient income to ensure that the business provides them with a satisfactory level of income to live their chosen lifestyle (Haber & Reichel, 2007). Although different age ranges have been used in the literature to define "new ventures", I agree with Zahra, Ireland, and Hitt (2000)'s reasoning that six years is a good cut off point. Ventures that reach the age of six years prove to have survived the challenging first years during which many start-ups fail, but have not yet "reached the mature stage, where they resemble established firms" (Bantel, 1998, p. 207).

Studying resource management in the context of new ventures is particularly relevant for several reasons. First, there is support in the literature to the notion of a resource development path dependency in new ventures. The initial resources acquired or developed bear long-term consequences for organizational outcomes and are often antecedents of a new venture's chance to survival (Aspelund, Berg-Utby, & Skjevdal, 2005). It is therefore particularly important to gain insights in resource management from the very early start of a new venture's life.

Second, new ventures typically have limited resources (Kimberley, 1976). In general, a low level of all kinds of resources is a critical issue and a point of failure for many new ventures (Stinchcombe, 1965). Hence, resource management is a particularly salient issue for new ventures as, in a resource-constrained context, resource scarcity may prolong the effects of poor resource management choices (Sirmon et al., 2007).

Third, new ventures also typically have limited *access* to resources (Ambos & Birkinshaw, 2010). This phenomenon is related to the "liability of newness" of new ventures. The liability of newness refers to the constellation of problems associated with the ventures' newly founded status, which renders them particularly prone to failure (Stinchcombe, 1965). Many of these problems are caused by the (perceived) increased risk level of new ventures because of a lack of tangible predictors of success that can help resource providers to assess the viability of the venture. Since the motivating factor for resource providers to give resources to an organization is their belief or feeling that the organization is indeed viable, the lack of an operating history, proven track record etc. results in a reduced capacity to acquire resources from resource providers when competing with established players (Zimmerman & Zeitz, 2002). Understanding how new ventures can overcome the challenges related to their liability of newness is therefore important to enhance the chances of new venture survival and growth.

Fourth and finally, a dynamic, process view on resource management in the context of new ventures has, so far, received limited attention in existing literature. Most studies seem to take a static perspective and focus either on new organizations with limited resources, or mature organizations with abundant resources (Baker & Nelson, 2005; Danneels, 2011; Hargadon & Bechky, 2006; Katila & Shane, 2005). The dynamic approach taken in this dissertation, focusing on different stages of development of a new venture's life, therefore contributes to the extant literature about resource management and new venture evolution.

1.4.2. Qualitative methods

Another particular challenge in understanding new venture practices is data related. Detailed data on new ventures are not easily available (Khaire, 2010). The small scale and low chances of survival of new ventures make it difficult to identify and get access to large amounts of data about new venture practices (Headd, 2003; Zahra et al., 2000). Moreover, since "resource management" is an umbrella term that covers many different activities, a considerably detailed approach is called for to understand the process of resource management in a new venture context. Since extant literature seems insufficiently developed to formulate hypotheses to test the relationship between resource management and other variables in a new venture context and recalling Prof. Chris Zott's words during the Academy of Management Annual Meeting conference in 2012 that "the concept of 'resources' is so overarching, encompasses so many aspects and is so interrelated to other activities that we can't code it quantitatively, we can only gain useful insights in the concept by doing case studies", a qualitative design is argued to be most appropriate for this doctoral dissertation. With qualitative data, one can preserve chronological course, understand which events lead to which consequences and derive insightful explanations, which coincides with the primary aim of this doctoral dissertation (Miles & Huberman, 1994; Pratt, 2009).

The qualitative research strategy taken in the three studies is case-based. The central notion in qualitative, case-based research is to use one (study 2 and 3) or multiple cases (study 1), to create theoretical insights, constructs, propositions and/or midrange theory from case-based, empirical evidence (Yin, 2013). In choosing a qualitative, case-based design, concerns about limited validity are traded off against the opportunity to gain deep insights into a poorly documented phenomenon. Qualitative data are more likely to result in rich insights and new integrations (Eisenhardt, 1989). Single cases provide opportunities to explore a significant phenomenon under rare or extreme circumstances and can therefore richly describe the phenomenon (Siggelkow, 2007). Multiple cases enable comparisons that clarify whether an emergent finding is simply idiosyncratic to a single case or consistently replicated by several cases and are therefore argued to be able to create more robust theory (Yin, 2013). In this dissertation the first study concerns a multiple case study design, while the second and third study concern a single case study design.

In qualitative, case-based research, case sampling is crucial for later analysis. Different sampling methods can be used to select cases, such as theory-based, snowball, extreme case, stratified or random sampling, just to name a few (Miles & Huberman, 1994). The cases in this dissertation were selected using a purposeful sampling logic. This means that the cases were selected because of their particular ability to provide rich data in order to learn a great deal about the issues under study (Patton, 1990). The cases selected in the different studies are particularly suitable for illuminating the resource management activities examined at the particular stage of development in which the respective studies are situated (Eisenhardt & Graebner, 2007).

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2

DISSERTATION STUDIES

STUDY 1

UNDERSTANDING A NEW GENERATION INCUBATION MODEL:

THE ACCELERATOR

2. UNDERSTANDING A NEW GENERATION INCUBATION MODEL: THE ACCELERATOR

Abstract

Prior research hints at the accelerator as a new generation incubation model. Accelerators have become an umbrella term for any program providing a service structure of mentorship, networking opportunities and access to funding. The challenge, however, is to understand their distinctive characteristics and profiles geared towards reinforcing business start-ups. How do accelerators operate as a new generation incubation model? This inductive study investigates 13 accelerators across Europe and adopts a design lens to identify the accelerator model's key design parameters. We identify five key building blocks and distinguish between three different types of accelerators, taking the primary design theme of the accelerator into account. We contribute to the incubation literature by extending recognition of the heterogeneity of incubation models, by delineating the accelerator as a distinctive incubation model and by introducing the design lens as a useful theoretical framework to investigate incubation models and their evolution.

2.1. Introduction

Over the past decades a wide variety of incubation mechanisms have been introduced by policy makers, private investors, corporates, universities, research institutes etc. to support and accelerate the creation of successful entrepreneurial companies. Whilst extant literature on incubation mechanisms agrees on their contribution to the nurturing of new ventures in general, it also points to the need to take the heterogeneity of different incubation models into account (Barbero, Casillas, Wright, & Garcia, 2014). Incubation models have evolved (Bruneel, Ratinho, Clarysse, & Groen, 2012) and continue to evolve into new generation incubation models. It is therefore important to gain insights into the specific features of evolving incubation models to assess their working and performance (Mian, 1997) and their impact on incubated ventures (Barbero, Casillas, Ramos, & Guitar, 2012).

A new generation incubation model, introduced in Europe in the last five years, is that of the seed accelerator program. "Accelerators" are organizations that aim to accelerate successful venture creation by providing specific incubation services, focussed on education and mentoring, during an intensive program of limited duration (Cohen & Hochberg, 2014; Miller & Bound, 2011). Accelerators emerged mid-2000 as a response to the shortcomings of previous generation incubation models, which are primarily focused on providing office space and in-house business support services (Bruneel et al., 2012). The first accelerator, Y Combinator, was established in 2005 in Cambridge, Massachusetts, and has been a source of inspiration for many accelerators to follow. In 2009, the Difference Engine kick-started the European accelerator sector and in 2013, Seed-DB, a platform which analyses accelerators and their companies worldwide, reported over 213 accelerators worldwide, which have supported approximately 3,800 new ventures.

Yet, despite these success examples and the rapid proliferation of accelerators across different regions, empirical and theoretical knowledge about the distinct characteristics and drivers of this new generation incubation model is scant (Birdsall, Jones, Lee, Somerset, & Takaki, 2013). Furthermore, insights from the extant incubation literature only partly help us to understand the working of accelerators. Research on incubation models has provided in-depth insights into the differences in the organization, activities, services and objectives of incubator types (Aernoudt, 2004). However, we cannot simply assume these differences hold for accelerators, which seem to extend existing approaches to a very distinctive type of incubator. In addition, the business incubation literature lacks a theoretical lens to analyse and explain the heterogeneity among different incubation models, with the majority of published studies being largely descriptive in nature (Bruneel et al., 2012; Hackett & Dilts, 2004).

Against this backdrop, we set out to explore 13 accelerators in Europe in order to answer the following research question: “How do accelerators operate as a new generation incubation model?” Specifically, we introduce the design perspective developed by Zott and Amit (2010) in their study about business models as a useful theoretical lens to look at the phenomenon and identify an accelerator’s primary design parameters. This enables understanding of how accelerators operate and how they particularly create value for their ventures. By doing so, we aim to contribute to the existing incubation literature in two ways. First, by delineating accelerators as a new generation incubation model, we identify accelerators’ key design parameters and conceptualize the dimensions of their heterogeneity. Second, by introducing a design lens as an appropriate theoretical framework for investigating new incubation models, we enable the consistent monitoring of incubation model evolution.

2.2. Theoretical background

2.2.1. Incubation models

An incubation model is broadly defined as the way in which an incubation entity provides support to start-ups to improve the probability of survival of the portfolio companies and accelerate their development. It is the model used by the organization or mechanism to deliver incubation services to start-up companies and create and capture value from them (Amit & Zott, 2001; George & Bock, 2011). Incubation models have evolved since the establishment of the first incubators, science parks, innovation centres and the like. Academic research has followed this evolution by providing a variety of studies focusing on different incubation model characteristics, classifications and typologies, and their evolution over time.

2.2.1.1. Incubation model characteristics, classifications and typologies

The main body of research on incubation has devoted considerable attention to describing different incubation mechanisms and models (Barbero et al., 2014). The literature on academic entrepreneurship for example, focuses on how universities nurture spin-offs into successful start-ups via internal approaches such as technology transfer offices, science parks and incubation infrastructures (Clarysse, Wright, Lockett, Van de Velde, & Vohora, 2005; Van Looy, Debackere, & Andries, 2003). The literature on corporate entrepreneurship illustrates how large companies, similar to universities, rely on quasi-internal activities and develop in-house incubation facilities to assist new start-ups as a means to source new ideas (Becker & Gassmann, 2006; Grimaldi & Grandi, 2005; Hill & Birkinshaw, 2014). In the public sector, business incubators are recognized as a popular instrument to foster entrepreneurship and regional economic development (Smilor & Gill, 1986) and in the private sector incubation through rent-seeking has grown into a separate industry, with the involvement of investors as a way to improve the deal flow of their portfolio (Miller & Bound, 2011). The latter is perceived as a high-risk investment model for the support of high-potential new ventures, originating from the venture capital and corporate industry.

As incubation mechanisms have matured and multiplied, different incubation models have emerged, resulting in a plethora of definitions and typologies, based on a variety of distinguishing characteristics. The most fundamental categorization concerns the distinction between non-profit and for-profit incubation models (Aernoudt, 2004; Grimaldi & Grandi, 2005). Beyond this basic dichotomy, research provided different classifications primarily depending on strategic objectives, service offerings and competitive focus, the latter distinguishing between industry sector, type of start-up, phase of intervention and geographical reach (Vanderstraeten & Matthyssens, 2012). Barbero et al. (2014) converge on four broad models: (1) business innovation centres, with a focus on regional economic development, (2) university incubators to facilitate technology commercialisation, (3) research incubators embedded in research institutes to valorise research output, and (4) stand-alone incubators, focussed on selecting and supporting high-potential ventures.

2.2.1.2. Incubation model evolution

A more recent stream of studies adopts a dynamic view on incubation research, by focusing on the evolution of incubation models over time (Grimaldi & Grandi, 2005). These studies advance the existence of a generational sequence of incubation models, led by changing needs of participating ventures. They argue that each generation of incubation models adapts its value proposition to the evolving needs of participating ventures (Bruneel et al., 2012).

The first generation of incubation models, introduced in the early nineties, primarily focused on providing physical and financial resource support (for example office space and small financial injections) to early-stage high potential ventures (Phan, Siegel, & Wright, 2005). Throughout the nineties, new incubation models emerged, which gradually moved away from a mere focus on offering basic office space and financial support, towards a broad range of more intangible high value added services. This second generation of incubation models included, amongst other things, services such as aid in evaluating different market opportunities, access to knowledge intensive services, product development support, access to knowledge, expertise and networks of entrepreneurs and provision of entrepreneurial finance (Clarysse & Bruneel, 2007; Soetanto & Jack, 2013). More recently, we can identify a further shift, hinting at a new generation of incubation models, which focuses on knowledge intensive business services, moving away almost entirely from the primary services for which the incubation models were founded (i.e. rental services).

2.2.1.3. The accelerator: a new generation incubation model?

The accelerator model is an exemplar of the recent shift towards a focus on intangible, knowledge intensive, support services in incubation services. An accelerator is an organization, which aims to accelerate new venture creation by providing education and mentoring to cohorts of ventures during a limited time (Cohen & Hochberg, 2014). The accelerator model focuses on intangible services, such as mentoring and networking, and has a number of other specific characteristics that set it apart from existing incubation models (Isabelle, 2013). First, they are not primarily designed to provide physical resources or office support services over a long period of time. Second, they typically offer pre-seed investment, usually in exchange for equity. Third, they are less focused on venture capitalists as a next step of finance, but are more closely connected to business angels and small-scale individual investors. One of the reasons for this difference is that their focus is on early-stage tech start-ups for which the costs of experimentation have dropped significantly in the last decade, rather than capital-intensive start-ups, such as technology-oriented spin-offs from universities. Fourth, the accelerator model places emphasis on business development and aims to develop start-ups into investment ready businesses by offering intensive mentoring sessions and networking opportunities, alongside a supportive peer-to-peer environment and entrepreneurial culture (Christiansen, 2009). Fifth, the accelerator model concerns time-limited support (on average 3 to 6 months), focused on intense interaction, monitoring and education to enable rapid progress, although some provide continued networking support beyond the program as well.

Although literature suggests that the accelerator model can be considered a new generation incubation model (Wise & Valliere, 2014), formal analysis about its particular characteristics and drivers is lacking. The few available studies examining accelerators are largely descriptive in nature and lack a consistent theoretical lens to study the phenomenon (Cohen & Hochberg, 2014; Miller & Bound, 2011). We address this gap by providing a more informed image of new generation incubation models in general and the accelerator model in particular, as part of a broader effort to introduce the design lens as a systematic methodological approach to study incubation evolution.

2.2.2. A design lens to study incubation model evolution

The design lens introduced by Zott and Amit in their research about business model design (Amit & Zott, 2012; Zott & Amit, 2007, 2010) is a useful framework to study incubation model evolution. This stream of research introduces the concept of an organization's activity system, concerning the set of interdependent organizational activities conducted by the focal organization and its partners, enabling the organization to create, deliver and capture value in concert with these partners. It suggests two sets of design parameters that should be taken into account when choosing the appropriate "model" or "template" for the activity system to perform its activities: design elements and design themes. Design elements are the key building blocks of the activity system's model, which set it apart from other models. Design themes represent the common theme that orchestrates and connects the different elements into a particular model and as such categorize different models of activity systems (Amit & Zott, 2012).

The activity system design perspective is particularly relevant to study a new generation incubation model, as it provides a conceptual toolbox to identify and assess its key elements and themes. It can be used to, on one hand, distinguish the new model from existing models, through identifying the model's vital elements and, on the other hand, reveal the heterogeneity within the new model, through identifying the main themes characterizing different types within the new generation model. As such it provides a structured framework for incubation researchers to consistently track and assess incubation model evolution.

2.3. Methods: sample, data collection, and analysis

Given the lack of previous research specifically on accelerators, the contemporary and therefore still relatively unexplored subject under study, and our "how"-research question, we choose an inductive, multiple case study design as a research strategy (Eisenhardt & Graebner, 2007; Tracy, 2010).

2.3.1. Sample

We use a theoretical sampling approach (Yin, 2013). This means that we started our sampling by only focusing on cases that comply with a predefined description of an accelerator, clearly delineating the accelerator model from other incubation models. Based on an accelerator's specific characteristics (cfr. infra), we selected cases with the following three characteristics: (1) focus on intangible services instead of physical resources, no individual office space provided; (2) education, intensive mentoring and networking offered through a time-limited program; (3) possible offer of upfront investment (£10k - £50k), mainly in exchange for equity (~5-10%). Using the above criteria, we identified an initial dataset of 41 accelerators in Europe. We further imposed two additional criteria on the dataset to result in a final selection of 14 cases (a) the cases are viewed by experts who sit in the European accelerator advisory board, called the Accelerator Assembly, as accelerators which have developed a track record and have signalled to stay in the field for a longer time period and (b) they are located in one of the three "leading accelerator regions" in Europe: London, Paris and Berlin. The Regional Entrepreneurship and Development Index (REDI), a complex composite indicator of regional entrepreneurship that captures both individual-level actions as well as contextual influences such as the financial possibilities of businesses, ranked the regional entrepreneurial performance of London, Ile-de-France and Berlin amongst the top in the European Union (Szerb, Acs, Autio, Ortega-Argilés, & Komlósi, 2014). These three cities created the conditions for accelerators to take off as they have a sufficiently dense population of entrepreneurial ventures to be attractive for accelerators and have a developed seed stage funding supply resulting in better circumstances for start-ups and start-up programs to make an impact (Salido, Sabás, & Freixas, 2013). We argue that focusing on the best performing accelerators only contributes to our theoretical sampling approach as it facilitates access to rich insights about an accelerator's key design parameters. As the accelerator model is still very young (average age of 3 years) we relied on expert judgements rather than established performance indicators in incubation research such as the number of jobs created, number of graduates and occupancy rate (Barbero et al., 2012). Among the 14 selected, the managing directors of 13 accelerators agreed to participate in our study. Table 1 provides a final list of the 13 accelerators included in the study and their key characteristics.

Insert table 1 about here

2.3.2. Data collection

We used two data sources: interviews and archival data. The primary data source involved semi-structured interviews with the managing directors of the 13 accelerators selected, during the second half of 2013 and early 2014, using the repertory grid method as a technique to structure the interviews (Easterby-Smith, Thorpe, & Holman, 1996). The repertory grid technique focuses on the construction of meaning by individual participants in a specific setting and was chosen as a technique to supplement standard interview questions, (such as "Can you describe your ideal portfolio company?" "What makes your accelerator unique? etc.), due to its comparative efficiency and flexibility and its greater potential for objective validity and reproducibility (Symon & Cassell, 1998). Interviews ranged from 50 minutes to 1.5 hours and always involved two researchers: one conducting the interview, and the other taking field notes. Each interview was tape-recorded and transcribed, which resulted in 215 pages of total interview transcripts. The French-speaking interviewees were interviewed in their mother tongue, transcribed in French and then translated into English.

The interview data was supplemented with archival data from various sources, including industry reports, internal accelerator program records, company presentations, annual reports, websites and news articles about the organisation. These secondary data sources were important sources of information to familiarize with the context and construct preliminary case histories of each accelerator, as well as served as triangulation sources to validate emerging insights from the interviews (Huberman & Miles, 1983).

2.3.3. Data analysis

Our data analysis evolved in three stages. We started with writing individual case histories of each case using all archival data available. We then contacted the managing directors of the accelerators through email to ask for an interview, with the preliminary case history of their accelerator attached, in order to increase response rates (Yin, 2013). Further communication through email and telephone was used to schedule interviews and validate the preliminary case histories.

Once the case histories were validated and interviews were scheduled, we proceeded with conducting the interviews, using the repertory grid method both as a data collection and data analysis technique. We followed the three stages of the basic repertory grid technique (Easterby-Smith et al., 1996). First, we defined 15 accelerators (the 13 cases under study together with the 2 pioneering accelerators in US: Y Combinator and Techstars US) as our "grid elements" (=objects of attention within the domain of investigation). Each grid element was written down onto an individual card. Second, we used "triads" and "the full context form" (Tan & Hunter, 2002) as two techniques to elicit "constructs" (=qualities describing and differentiating elements). During the first part of the interview we constructed a triad by combining the interviewee's own accelerator with two accelerators, randomly drawn from the pack of cards. The three cards were presented to the interviewee, who was then asked to identify ways in which two accelerators are similar yet different or opposite from the third. This process was repeated until no new constructs could be identified. In the second part of the interview, we presented the full repertory of cards to the interviewee and requested him or her to sort the stack of cards into any number of discrete piles based on whatever similarity criteria the interviewee chose to apply. After the sorting was completed, the interviewee was asked to provide a descriptive title for each pile of elements. Finally, after completion of each interview, we constructed a "grid" (=matrix) of grid elements and constructs and completed each cell of the grid with information from the interview (i.e. for each accelerator we entered data in the cells representing how the accelerator is regarded in terms of the identified constructs).

The third stage of our data analysis involved a cross-case analysis. As suggested by Eisenhardt (1989), one tactic in cross-case analysis is to select categories and dimensions and then to look for inter-case similarities and differences. The categories and dimensions were suggested by the elements and constructs from the grids built up for each interview and all cases were replicated against one another (Yin, 2013). We counted an initial number of 17 constructs identified by the interviewees and applied two rounds of comparative analysis to cluster constructs "that go together" (Miles & Huberman, 1994).

A first round of analysis resulted in grouping the 17 constructs together in 9 elements. After a second round we eventually agreed upon a final set of 5 design elements. The final set of 5 design elements were reviewed by the interview respondents to further validate our results. We finalized our analysis by identifying themes cutting across cases. The full context form technique applied during the interviews resulted in a number of different groups of accelerators, ranging from 2 to 5 different groups. We further compared all of the data available for each case in a matrix to reveal element relationships and agreed upon three distinct groups of accelerators in our dataset. The three different groups were again reviewed by the interview respondents to validate our findings. We employed an insider-outsider approach, which means that a third person was involved in the analysis rounds as an independent researcher so that the credibility of the findings would not rely solely on the interpretations of those conducting the interviews (Gioia, Price, Hamilton, & Thomas, 2010).

2.4. Findings

This section reports the results from the repertory grid construction and cross-case analysis. We discuss the five accelerator design *elements* and three accelerator design *themes* that emerged from our findings.

2.4.1. Design elements

The design elements of an activity system capture the key parameters that describe the activity system's architecture (Zott & Amit, 2010). As outlined above, the 5 design elements of the accelerator model were identified through comparative analysis of the 13 cases involved, which led us to cluster the 17 constructs identified by the interview respondents into 5 agreed upon design elements. Figure 3 and table 2 illustrate how we arrived at the final selection by respectively showing which of the 17 constructs were clustered together in a design element, and portraying supportive quotes for each of the 17 constructs. In what follows we describe each design element in detail.

Insert figure 3 about here

Insert table 2 about here

2.4.1.1. Program package

The program package consists of all services the accelerator offers to its portfolio ventures. The accelerator program package's core services that most differentiate the accelerator from previous generation incubation models are the well-elaborated and carefully planned mentoring services. Mentors are typically experienced entrepreneurs, which are heavily vetted before being included in the accelerator program. They are matched to specific ventures based upon speed dating or match making events and are frequently evaluated by the accelerator management team. Mentors help ventures to define their business model and to connect with customers and investors. Although there are variations in how this mentoring is operationalized, mentoring services are evident across all accelerators.

An accelerator's program package most often also includes a curriculum or training program, covering a variety of topics such as finance, marketing and management, which the new ventures have to go through when entering the accelerator program. The ProSiebenSat.1 accelerator for instance includes courses in finance, user design, PR, marketing and legal aspects, and a program of ad hoc events, such as, expert workshops and inspiring lectures.

In addition to educational services, accelerators offer regular counselling services, provided by the accelerator management team. These are offered in the form of weekly "office hours" or evaluation moments and provide the portfolio companies with business assistance and enable monitoring of their progress.

The portfolio companies are also given the opportunity to come into contact with customers and investors through the organization of demo days or investor days. During these days, customers and/or investors are invited to visit the accelerator and attend portfolio companies' presentations, followed by formal and informal networking opportunities.

Location services are also part of the accelerator program package, but are limited to co-location in a shared open office space, with the aim to encourage collaboration and peer-to-peer learning.

Finally, the program package also consists of investment opportunities offered to the portfolio companies. We find that most programs (8 out of 13) follow the traditional accelerator model of offering a small amount of funding in exchange for equity (ranging from £3,600–£50,000 for 3–10%). The equity stakes are typically made on a dilutable basis with pro–rata investments in ensuing rounds being optional case–by–case. Some form of follow–on funding can be provided as well. For example, Healthbox Europe has shaped an Angel Fund that acts as a co–investment fund to be invested alongside the accelerator as a separate legal entity.

2.4.1.2. Strategic focus

The second design element of an accelerator is the strategic focus. The strategic focus concerns the accelerator's strategic choices regarding industry, sector and geographical focus. The industry and sector focus ranges from being very generic (no vertical focus at all) to very specific (specialized in a specific industry, sector or technology domain). For example, Fintech Innovation Lab focuses exclusively on the financial sector, while L'Accélérateur is more broadly "retail-oriented". Overall, accelerators seem to be focusing their programs increasingly on certain themes rather than being generic.

In addition to an industry and sector focus, accelerators also have a geographical focus where they choose between being locally versus internationally active in their activities. Techstars is an example of a program that initially focused on US only, but then internationalized to Europe with a program in London and Berlin. However, each local program operates autonomously, while Techstars as a whole aims to share best practice across its local units.

2.4.1.3. Selection process

Accelerators make use of a rigorous, multi-staged selection process. Usually, an open call is organized for a period of time, during which portfolio companies can register and apply online on a software platform such as F6S.com, Fundacity or Angel.co. Some programs, like Startupbootcamp and Climate–KIC, go one step further and actively scout start-ups during events before the application period.

Then, a standardized screening process is organized in which external stakeholders tend to participate. Different types of stakeholders are asked to sit in a selection committee or to do interviews. The portfolio companies are expected to present their ideas and they are screened in person. For example, Healthbox Europe uses a selection committee, which comprises of mentors, investors and alumni, to help shortlist companies in its program.

Remarkably, all accelerators in our sample claimed that teams are the main selection factor. Entrepreneurial teams are typically selected in batches and single founders are only selected by exception. A representative example is the screening process of the Paris–based accelerator TheFamily. Their application process is perceived to be “founder–friendly”, since the team as opposed to the idea is the dominant decision factor for participation in the accelerator. Some accelerators will help founders with matchmaking and team formation, which is also of benefit to teams missing a specific skill set. For example the Paris–based accelerator Le Camping organizes an event called “Adopt a CTO” before opening the call to submit applications. This event offers single founders the opportunity to find a CTO and form a team. Other accelerator programs such as Startupbootcamp and Climate–KIC have entrepreneurs–in–residence. These are entrepreneurs with a specific skill who can join entrepreneurial teams, become co–founders, or build their own companies. They are more than mere advisors (compared to mentors), as they work closely together with the teams and become team members. Some entrepreneurs-in-residence are paid, others participate in the program driven by the opportunity, experience or personal growth.

2.4.1.4. Funding structure

A fourth design element characterizing an accelerator concerns its funding structure. We find that most programs receive the major part of their working capital from shareholders. These shareholders are either private investors, corporate companies or public authorities. Although most accelerators look to complement these sources with revenues, few of the accelerators we interviewed were able to get revenue from investments in the start-ups they support. Alternatively, this can also be because these programs are still relatively new and it will take some time before they have noticeable exits in their portfolio companies. Some accelerators diversify their model in order to source alternative revenue through the organization of events and workshops. For example, TheFamily organizes a lot of events, for which they sell tickets online, which has turned into a profitable event business.

2.4.1.5. Alumni relations

The last design element particular for an accelerator concerns its relations with alumni. The accelerators in the study put a lot of emphasis on keeping close and active relations with the companies that graduate from their program. Most accelerators run regular events for alumni and invite them back into the program to share their experiences where possible. These companies are used as reference cases and often get actively involved in the mentoring activities discussed above.

Some accelerators experiment with the extended provision of support services to alumni companies once graduated. Accelerators that take equity in their start-ups have an additional incentive for providing continued support to help their alumni succeed. Once an accelerator has developed over a number of years, the alumni network can be an important source for mentors and investors, as successful graduates are more likely to invest back into the community that supported them in the first place.

We conclude from our analysis that the five design elements – program package, strategic focus, selection process, funding structure and alumni relations – are the key building blocks of an accelerator model, as they appear in each of the 13 cases under study and allow parallels to be drawn and differences among the cases to be identified.

2.4.2. Design themes

Our data further reveals that the accelerators in our study vary in their architecture, depending on their approach to each of the design elements. In the next section we therefore describe the second set of design parameters that characterize an accelerator: its design theme. The accelerator's design theme is the common theme underlying a particular type of accelerator, orchestrating and connecting the different design elements (Zott & Amit, 2010). The accelerator design themes were identified through application of the "full context form" repertory grid technique during the interviews (see above) and a further cross-case analysis, focused on revealing themes cutting across cases. As explained in the data analysis, our data revealed three distinct themes characterizing three different types of accelerator. Table 3 provides an overview of the different accelerator types, outlining the differences and similarities regarding the 5 design elements, and illustrates which cases belong to each group. In what follows we again describe each type of accelerator in detail.

Insert table 3 about here

2.4.2.1. The "ecosystem builder"

The "ecosystem builder" is an accelerator typically set up by corporate companies that wish to develop an ecosystem of customers and stakeholders around their company. Large companies such as Microsoft and Accenture install or support an ecosystem builder accelerator in order to extend their network of stakeholders. The accelerator is used as a matchmaking device to connect lead customers with promising start-ups and in this way nurture the development of an ecosystem around the company. As an example, the accelerator FinTech Innovation Lab in London is run by Accenture. It has the primary aim to create a platform for the financial services industry to collaborate on innovation with early–stage ventures. With this, Accenture seeks to strengthen its relationship with banking clients and increase its foothold in the market. Similarly, one of the drivers of the Microsoft Ventures Accelerator is to support start-ups whose solutions will benefit Microsoft's vast SME customer base across Europe.

The ecosystem builder accelerator actively involves its corporate stakeholders in the accelerator's operations. For example, senior executives of the corporate are often involved in the selection process of portfolio companies. Hence, only those ventures that attract the attention of the corporate's executives and that will be able to enhance the corporate's ecosystem development are selected. Mentors are often sourced from the corporates as well. These corporate mentors help the start-ups to find their way through the internal decision–making system of the company. Interestingly, this type of accelerator most often has no profit orientation and offers no investment to the start-ups that participate in the program. Instead, these accelerators add value to the portfolio companies, primarily by helping them to connect with potential customers. The accelerator's network is therefore almost exclusively oriented towards the potential customer base. They are financed on a yearly basis by the corporate and often adopt soft performance measures. They frequently engage in symbolic actions such as broadcasting, newsletters, and showcase events, to illustrate their legitimacy in the absence of strict key performance indicators (Zott & Huy, 2007).

2.4.2.2. The "deal-flow maker"

The "deal-flow maker" accelerator receives funding from investors such as business angels, venture capital funds or corporate venture capital and has the primary aim to identify promising investment opportunities for these investors. This accelerator type resembles most of the original concepts of Y Combinator and Techstars developed in the

US. Its objective is to bridge the equity gap between early–stage projects and investable businesses.

The deal-flow maker typically provides some form of seed financing to the portfolio companies in exchange for equity. The screening criteria in these programs tend to favor ventures that are eligible for follow-on capital and have the ability to evolve in attractive investment propositions. The mentors used in these accelerators are often active business angels themselves, who play a further role in follow-up investments. The director of Fintech Innovation Lab described the mentors of deal-flow makers as "investors in disguise".

Deal-flow maker accelerators tend to select ventures, which already have some proven track record or in some cases have already raised pre–seed finance. They hence focus on start-ups that are in the later stages of development and often choose to specialize within a specific industry. By focusing on one specific sector, the accelerator management team can develop the necessary sector–specific knowledge and expertise to identify and exploit the economic potential of entrepreneurial teams.

2.4.2.3. The "welfare stimulator"

The "welfare stimulator" accelerator typically has government agencies as a main stakeholder. The primary objective of this type of accelerators is to stimulate start-up activity and foster economic growth, either within a specific region or within a specific technological domain. For instance, the European Commission supports the establishment of accelerators within particular technological domains of its economic development program (i.e. Knowledge and Innovation Communities or KICs).

The selection criteria and processes used in these accelerators are oriented towards attracting companies that fit within the vision of welfare creation. For example, the Paris–based accelerator Scientipôle Initiative promotes its program to unemployment agencies in order to encourage unemployed entrepreneurs to apply to the accelerator. It focuses heavily on the potential for job creation in its selection criteria.

Welfare stimulators typically select ventures in a very early stage. Quite often a value proposition has not yet been developed. As a consequence, the curricula and training programs provided by welfare stimulators are most developed among the three types of accelerators. Welfare stimulators typically organize training sessions, workshops and practical learning– oriented events to help the ventures develop their idea and value proposition. The accelerator's mentors are closely involved with the portfolio companies and provide hands-on guidance and advice. In some cases mentors are consultants or business developers, who – often on a paid basis – help to commercialize the technology or sell the product/service idea.

However, for a lot of welfare stimulator accelerators, the business model is rather unclear, as most public sponsors require some form of revenue after an initial financing period. Although most welfare stimulator accelerators present the typical investment model as a potential, others experiment with other forms of revenues such as tuition fees or registration fees for particular training courses.

The above findings suggest that the accelerator design themes are determined by the objectives of the affiliated shareholders (respectively corporates, investors and government agencies). The objectives of these shareholders; building a company ecosystem in the case of corporates, identifying interesting investment opportunities in the case of investors and stimulating start-up activity and economic development in the case of government agencies, are translated into the primary objective of the accelerator and represent the common theme orchestrating and connecting the accelerator's different design elements.

However, our data also point to the existence of hybrid accelerator types, which incorporate characteristics of two different accelerator types. For examples, the London-based accelerator Bethnal Green Ventures combines characteristics of the deal-flow maker and welfare stimulator. The accelerator receives funding from the UK Cabinet Office, Nominet Trust and Nesta and runs like a traditional deal-flow maker accelerator in many aspects. It focuses on high-potential technology start-ups and invests up to £15,000 in exchange for 6% equity. However, Bethnal Green Ventures also has a strong social dimension. It is a strong advocate of "Tech for Good" and exclusively focuses on companies that leverage products and services for social good. In addition to financial support it plays an important role in hosting meetings and events in order to build a social community around the portfolio companies and foster economic welfare creation.

2.5. Discussion and implications

This study extends previous incubation research by delineating the accelerator model as a new generation incubation model, by revealing the distinctive features of the accelerator model and identifying the heterogeneity of accelerator strategies and operations. The extant incubation literature already identified a number of descriptive characteristics of incubation models, resulting in a variety of typologies and classifications, but, so far, failed to provide systematic evidence about whether these insights hold for accelerators as well (Hackett & Dilts, 2004). Moreover, it lacks a consistent theoretical framework to define and assess different generation incubation models in order to account for the heterogeneity among incubation models and keep track of incubation model evolution. This study addresses these gaps and thereby provides important implications for both theory and practice.

2.5.1. Theoretical implications

Against a background of sparse research about accelerators, our study has several implications for research on incubation models in general and research into the accelerator model in particular.

First, we respond to the call in extant incubation research to take the heterogeneity among incubation models into account by delineating the accelerator model as a new generation incubation model, by identifying its key design parameters and by shedding light on the heterogeneity within the accelerator model. We show that accelerators have five particular design elements (program package, strategic focus, selection process, funding structure and alumni relations) and highlight the objectives of the accelerator's shareholders as the main driver orchestrating an accelerator's activities. By identifying three different groups of accelerators, we further contribute to the request from incubation scholars to take different types of incubation models and their specific features into account in order to assess performance (Barbero et al., 2014; Mian, 1997).

Second, our results show that accelerator programs adopt different ways of structuring and running their programs, and that this is largely determined by the objectives of their key shareholders. Although most accelerator managers in our study mentioned Silicon Valley based accelerators Y Combinator and Techstars as sources of inspiration, many of them do not adopt a pure deal-flow maker model. We find two other types (the ecosystem builder and the welfare stimulator) prevalent in Europe. The three accelerator types differ in satisfying different shareholder needs (respectively those of investors, corporates and public agencies). As a consequence the deal-flow maker focuses heavily on mentoring by serial entrepreneurs and business angels, who know how to create legitimacy for follow-up investments. This is in line with Kim and Wagman (2014), who suggest that accelerators act as certification intermediaries, providing information and services (e.g. screening practices and mentoring) valued by outside investors to help their portfolio ventures raise new capital. The ecosystem builder is mainly focused upon helping ventures through the complex decision making structures of corporate companies. Instead of mentors, internal members of the corporates are used to support and guide the portfolio companies. Finally, the welfare stimulator tends to be more program-led by providing intensive workshops and training sessions to help the ventures find their way to first customers. With this finding, we highlight shareholder objectives as important design parameters to take into account, in addition to those of the portfolio companies participating in the accelerator. Previous research has argued that the variety of incubation models is driven by the evolution of portfolio companies' requirements and needs, which encourage incubation mechanisms to differentiate the range of services that they offer. However, our evidence leads us to argue that differentiation between accelerators is driven by additional factors. Specifically, from our qualitative evidence we theorize that differences in the objectives of shareholders supporting or financing the accelerator will lead to differences in the way accelerators run their programs. Although portfolio companies' objectives do impact the design of an incubation model (after all, changing portfolio companies' needs gave rise to the accelerator model in the first place), our study highlights the importance of other stakeholder objectives, especially those stakeholders supporting and/or financing the accelerator, to explain heterogeneity among different accelerator model designs.

Third, by introducing a design lens to look at the accelerator model, we contribute to recurrent requests in incubation research to develop more theoretically grounded approaches to analyze incubation activities (Bruneel et al., 2012; Hackett & Dilts, 2004). We propose the activity system design perspective, highlighting design elements and themes as important design parameters to take into account, as an adequate theoretical lens to study incubation models and their evolution. The design lens offers a structured way to identify the key building blocks of the incubation model, enables classification of different incubation models, as well as allows heterogeneity within the model to be taken into account. Moreover, an additional advantage of this framework is that it allows accounting for hybrid models. Within our sample we note that two accelerators have hybrid models. Bethnal Green Ventures has a clear welfare stimulation focus but nevertheless copies the mentorship model typically present at the deal-flow maker model, while Healthbox has a clear ecosystem building focus but also provides some capital to its start-ups (see also table 3). The introduction of a design lens in incubation research embodies rich possibilities for further theoretical development and refinement. It not only gives researchers a concrete tool to study incubation models and their evolution but also brings the importance of design thinking, i.e. the design of an incubation model is seen as a key decision in the creation of an incubation entity, to the forefront of incubation research.

2.5.2. Managerial and policy implications

The accelerator design elements and themes identified in this study can be used to position different accelerators within the overall ecosystem. We suggest that initial advisors to early–stage ventures (e.g. government support agencies; university student and alumni entrepreneurship offices) should consider the different accelerator design elements and themes in order to orient nascent entrepreneurs towards particular types of accelerators that may best meet their needs.

The diversity of accelerators we have identified also has implications for policymakers in supporting different types of accelerators and evaluating their role. Rather than evaluating the effectiveness of an accelerator using using a fixed set of criteria, there is a need to develop measures that take into account the different objectives of different types of accelerators. Policymakers typically have specific objectives, such as regional development and employment. Taking these objectives into account, policymakers have to realize that the accelerators they finance might not necessarily be profitable in the short or even medium term. The ventures they invest in, the program they have to develop and their strategic focus do not always allow this. The systematic research evidence is sparse, but only deal-flow maker accelerators in very dense ecosystems such as Silicon Valley appear to have a proven business model. Unfortunately, we often see that policymakers expect welfare stimulators to have similar outputs as deal-flow makers.

As accelerators have grown in popularity, many nascent entrepreneurs and organizations such as universities, companies and regional development agencies feel attracted to the idea of starting an accelerator. Universities see it as a way to promote student entrepreneurship, companies as a way to tap into start-up innovation and talent, and development agencies as a way to create employment. Examples of university–led accelerators include "Beta Foundry" at Oxford University, InnovationRCA at the Royal College of Art and the pre–accelerator "Imperial Create Lab" at Imperial College, London. Our research shows that starting an accelerator needs a clear vision and strategy, and a good fit between the different design parameters and the objective one wants to achieve with the accelerator. Given the results so far, it seems unlikely that accelerators will be profitable or even sustainable without continued financial support for a number of years. Although accelerators play an important role, the need for this type of support needs to be legitimate. If not, the accelerator initiatives will disappear as soon as the financial support for them decreases.

Finally, our findings suggest that accelerators may help solve some of the problems associated with previous generation incubation models. Earlier, some incubation models have been accused of merely acting as life support and keeping tenants alive in order to secure rent and fill their incubation space. As most accelerators invest in their start-ups the accelerator model has an added incentive to make sure that the selected start-ups survive and scale. Accelerators are a way to shorten the journey of start-ups, resulting in either quicker growth or quicker failure. However, as some accelerators do allow alumni to remain in the space after the program has ended, we have to take into account the potential of creating adverse consequences if not time limited.

2.5.3. Limitations and future research

As all studies, this study is not without limitations. This final section aims at outlining the particular limits of this study, which provide interesting avenues for further research. First, the paper is based on accelerators located in the three leading accelerator regions in Europe: London, Paris and Berlin. These different European regions imply different contexts in which accelerators need to function and be sustainable. However these three regions may not be representative of all types of regions in Europe. As spatial context may have an important influence on entrepreneurial and innovation ecosystems (Levie, Autio, Acs, & Hart, 2014), further research is needed to test our findings in similar regions in other countries and in different environments in general. Moreover, further research is needed to examine the influences of policy, industry, density and economic conditions on the configuration of different accelerator types in a particular region.

Second, as accelerator programs develop, our framework, highlighting the accelerator's key design parameters, can serve as a basis for more rigorous evaluations of accelerator performance and can be used to define suitable success metrics in achieving certain objectives. Subsequent analyses might also usefully examine the challenges faced by particular accelerators as they evolve over time into different models, depending on the success of their initial configuration.

Third, whilst beyond the scope of this paper, which has focused on the accelerator as a unit of analysis, the study of the impact of different accelerator types on their portfolio companies might be an interesting avenue for further research as well. The approach used by the accelerator is likely to have an impact on the entrepreneurial journey of start-ups and on the value added to them. Further research on the differences between different accelerator types and their impact on the entrepreneurial process would be interesting, as this would enable identification of best practices with the aim of implementing a customized acceleration strategy to propel start-ups.

Finally, in order to truly gauge the effectiveness of different models there is a need for studies that compare accelerated ventures to a control group of non-accelerated ventures in order to provide robust insights into the contribution of accelerators. Furthermore, as decision makers perceive a focus on one sector or technology as an interesting strategic option, assessment of differences in effectiveness and value-added contributions to the start-ups can improve our understanding of the possible benefits of specialist versus generalist accelerators.

2.6. Conclusion

Accelerators play an important role in stimulating entrepreneurship. However, prior research has provided only limited insight into their distinctive features and the heterogeneity of their strategies and operations. Against a background of sparse prior research, this study has produced several interesting results about an accelerator's key design parameters that have novel implications for the incubation literature and practice. Obviously, because the phenomenon is so new, uncertainty still exists about the future success of accelerators. What is undeniable, though, is the compelling economic logic of such organisations. We hope that the findings of our study will open the way for further systematic analyses of the processes and impacts of accelerator programs.

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Table 1: Case descriptives

	Name	Acronym	Location	Founding date	Program length	Investment size	Equity stake taken
1	*Techstars London*	TL	UK, London	2013	3 months	£12500 + option conv. loan	6%
2	*Healthbox Europe*	HB	UK, London	2012	4 months	£50000	10%
3	*Fintech Innovation Lab*	FIL	UK, London	2012	3 months	/	/
4	*Bethnal Green Ventures*	BGV	UK, London	2011	3 months	£15000	6%
5	*Climate-KIC Europe*	CKE	Europe	2010	12-18 months	max. of €95000	/
6	*Microsoft Ventures Accelerator*	MVA	Germany, Berlin	2013	4 months	/	/
7	*Axel Springer Plug & Play Accelerator*	ASPP	Germany, Berlin	2013	3 months	€25000	5%
8	*ProSiebenSat.1 Accelerator*	PSSA	Germany, Berlin & Munich	2013	3 months	€25000	5%
9	*Startupbootcamp Berlin*	SBC	Germany, Berlin	2012	3 months	€15000	8%
10	*Le Camping*	LC	France, Paris	2010	6 months	€4500	/
11	*TheFamily*	TF	France, Paris	2013	indefinite	/	3%
12	*L'Accélérateur*	LA	France, Paris	2012	4 months	€10000 + option for more	7-10%
13	*Scientipôle Initiative*	SI	France, Paris	2002	6 months	€20000 - 90000	/

Table 2: Data structure supporting accelerator design elements

Design elements	Constructs	Representative quotes
PROGRAM PACKAGE	*Mentoring services*	"80-100 individuals in our mentor network" [HB, Nov 2013] "The mentor model came from Techstars US. Mentors are heavily involved in the program." [BGV, Oct 2013] "Start-ups are given feedback all the time, there is a structured feedback process regarding partners and mentors." [MVA, Dec 2013) "We meet every mentor face-to-face and kind of have a debrief or pre-brief." [SBC, Dec 2013] "The only method that we found that works is: rent a room in a restaurant, bring in food and a lot of alcohol and close the doors, and in 4 hours magic happens" [MVA, Dec 2013] "First month is mentor-heavy, with matchmaking and presenting and speed dating…" [SBC, Dec 2013] " We have intern mentors, so from within the company, that have expertise in a certain area." [PSSA, Nov 2013] "We have godfathers... They are actually internal coaches from Axel Springer. So we match them with the teams." [ASPP, Dec 2013]
	Curriculum / training program	"We have like lawyers, accountants, and HR people that also offer their services to our start-ups through workshops, lectures or office hours. Then we have some lectures that inspire them." [MVA, Dec 2013] "…fixed curriculum points they have to, or should attend. And those are sessions with internal and external mentors and coaches, with experts, with entrepreneurs, with people from the team where they learn things about specific functional topics." [PSSA, Nov 2013]
	Counselling services	"We check with the companies at least weekly if not twice a week so we do have regular conversations." [HB, Nov 2013] "We also do a kind of weekly stand-up. On Friday they have to stand in front of the class explaining what they did last week and what they want to achieve." [MVA, Dec 2013] "We set up an action plan and use the cash to address the bottlenecks. To identify the bottlenecks, you need to sit around the table for hours, maybe days… Then we have to follow-up by visiting the guy (~ founder) step-by-step." [KIC, Dec 2013]
	Demo days / Investor days	"Our Demo Day is slightly different. It is not about getting investors in the room, it is actually getting customers in the room for the companies." [HB, Nov 2013] "The majority of people we invite for the Investor Day are investors and they could be angel investors, VC's, private equity investors…" [FIL, Nov 2013]
	Location services	"Free office space here, free Wi-Fi, free stunning view, free drinks." [MVA, Dec 2013] "We ask them to come to London and we provide them with desk space and office space." [FIL, Nov 2013]
	Investment opportunities	"The deal is 100% standardized because we don't have time to negotiate with the teams… so we take 5% of equity in the companies and we give them €25,000 plus our mentoring, coaching and the office space." [PSSA, Nov 2013] "We invest some cash in the beginning. Between 5 and 15K. But if we believe that the companies are in the right track and need some money then we will invest between 500 and 200K and we usually take between 7-12%." [LA, Nov 2013] "So we have $120,000, $20, 000 dollars goes for 6% plus the program, plus all the freebies which are not insignificant. And alongside that the teams get $100,000 on a note, convertible note." [TL, Jan 2014] "After graduation, we have the discretion of writing the 150,000 check.

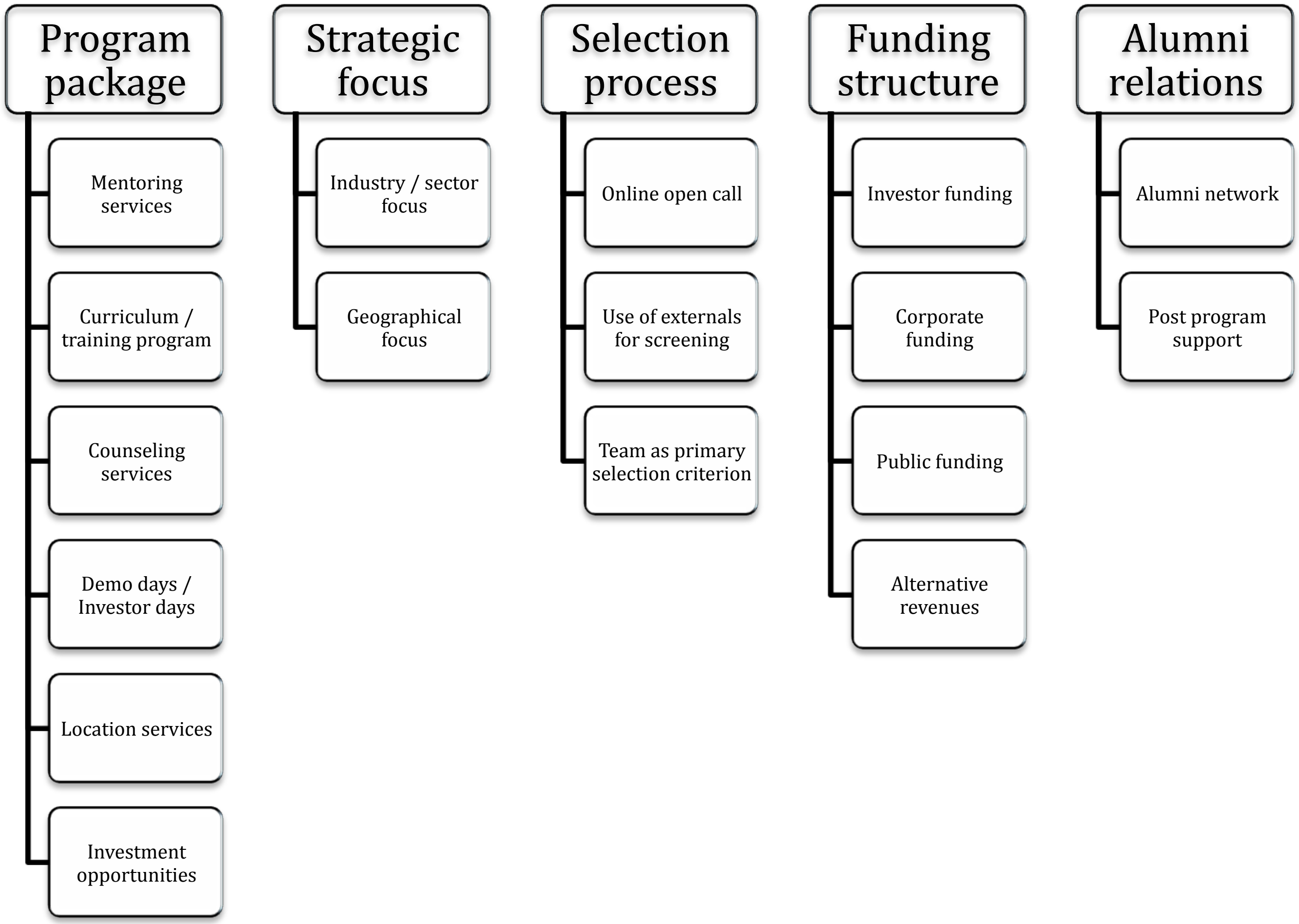
		The alternative, which we do use a lot, is we basically say we will co-match." [TL, Jan 2014] "We can do follow-up investments… if anyone comes and says like 'I like them' and he invests, we can give the other 50%. So we can mirror the investment." [ASPP, Dec 2013]
STRATEGIC FOCUS	*Industry / sector focus*	"Nesta's investment themes… health, education and sustainability" [BGV, Oct 2013] "We are an open thematic accelerator" [LC, Jan 2014] "We customized that model to be more reflective of the healthcare market and our interest in exploiting that area." [HB, Nov 2013]
	Geographical focus	"90% of our businesses are in the US and 10% is not... I used to run a stand-alone program and it would have been hard to differentiate myself." [LC, Jan 2014] "The London program is very much based on the New York program that we have" [FIL, Nov 2013] "There are these that are considered innovative enough since we only fund innovative projects that are less than 3 years old and are in the region of France." [SI, Dec 2013]
SELECTION PROCESS	*Online open call*	"We have an application phase that is open for about 4-6 weeks. During these 4-6 weeks we ask companies to submit and to fill in a questionnaire" [PSSA, Nov 2013] "We open the online platform for two months. So future applicants have two months to register and to complete their applications" [LC, Dec 2013]
	Use of externals for screening	"We shortlist companies with the help of members of the selection committee who are representative of the mentors and some of the investors of the program" [HB, November 2013] "We use alumni a lot when screening, especially if the idea is in line with their area of expertise... I even let them do interviews. And we do have a selection committee – they are involved in the selection days" [SBC, Dec 2013] "The banks meet the start-ups and they interview them" [FIL, Nov 2013]
	Team as primary selection criterion	"We learned that selecting teams remotely is difficult, we want to see them face-to-face, in action" [SBC, Dec 2013] "We do a final panel interview which we do in person rather than Skype, because we want to meet the team" [TL, Jan 2014] "We have a focus when we look at selection: team, team, team and opportunity" [TL, Jan 2014] "We have like 3 important criteria: the team, degree of innovation and market opportunity" [LC, Nov 2013] "We look at personal qualities (ambition, tenacity, frugality, openness, flexibility) and strong teams which interact well" [LA, Nov 2013]
FUNDING STRUCTURE	*Investor funding*	"We are privately funded mostly by business angels and a couple of VC's" [SBC, Dec 2013] "Our investors are either all professional investors or VCs or angels. And we cap the amount of money that any investor can put into our fund. Because we actually want diversity in our investor base rather than 1 person turning up and say 'here is half the money'. So I tend to use it much more aggressively than some others do to create a network of smart investors" [TS, Jan 2014]
	Corporate funding	"Accenture covers the operating costs" [FIL, Nov 2013] "Then you have the ones that are corporate funded (like us), which is typically a prerequisite for providing a good program that will last for a longer period of time" [PSSA, Nov 2013] "There is no partner funding, so this is all Microsoft funded. There is no partnership with any organisation. I am a 100% Microsoft employee, this building is financed by Microsoft." [MVA, Dec 2013].

	Public funding	"It is a non-profit association and it is a sponsorship. So we receive some money and we allocate it, this money, to our events and our place" [LC, Nov 2013] "Wayra UnLtd is, like us, funded from the Cabinet Office… We have a non-profit part which owns the majority of Bethnal Green Ventures LLP" [BGV, Oct 2013]
	Alternative revenues	"Actually we have a very profitable event business. We are organising a lot of events and people like our events. So we know how to sell tickets online, it is a good way to gain money, the event business is an incredible business with capital" [TF, Nov 2013] "Startupbootcamp Berlin is renting out desks in our new co-working space called the Start-up Gallery" [SBC, Dec 2013]
ALUMNI RELATIONS	*Alumni network*	"We build the infrastructure to try to help them… We run alumni-events quite often and alumni are invited back in for all the program stuff when we run a program. So we create a lot of opportunities for them" [BGV, Oct 2013] "We have an alumni annual meeting where we bring as many alumni as possible together. And they just share what is going on and they connect from across the programs" [SBC, Dec 2013]
	Post program support	"Our program runs from October to January but we continue to offer office space until past September. So it is one less thing for the companies to worry about because, you know, office space in London is extremely expensive. So we continue to make introductions and continue to support the companies where we can. Obviously it is not as hand-on as it was during the program but there is additional support" [HB, Nov 2013] "We don't kick the alumni out of our space, why would we? And we run monthly alumni events in London. There is one tomorrow, every first Thursday of every month. We have it in the same space all the time" [TL, Jan 2014]

Table 3: Data structure supporting accelerator design themes

<table>
<tr><th></th><th>ECOSYSTEM BUILDER</th><th>DEAL-FLOW MAKER</th><th>WELFARE STIMULATOR</th></tr>
<tr><td>Design theme</td><td>“Matching customers with start-ups and build corporate ecosystem”</td><td>“Identification of investment opportunities for investors”</td><td>“Stimulation of start-up activity and economic development”</td></tr>
<tr><td>Program package</td><td>Mentoring provided by internal coaches from corporates
No seed investment or equity engagement</td><td>Mentoring provided by serial entrepreneurs and business angels
Standard seed investment and equity engagement</td><td>Mentoring provided by serial entrepreneurs and business developers; most extensive curriculum
Mostly seed investment and equity engagement</td></tr>
<tr><td>Strategic focus</td><td>Mix of generalists and specialists
International focus</td><td>Mix of generalists and specialists
Local and/or international focus</td><td>Mostly generalists
Local and/or international focus</td></tr>
<tr><td>Selection process</td><td>Favour new ventures in later stages with some proven track record</td><td>Favour new ventures in later stages with some proven track record</td><td>Favour very-early stage new ventures</td></tr>
<tr><td>Funding structure</td><td>Funding from corporates</td><td>Funding from private investors (business angels, venture capital funds and/or corporate venture capital)</td><td>Funding from local, national and international schemes; experimenting with funding structure and revenue model (search for sustainability)</td></tr>
<tr><td>Alumni relations</td><td>Establish infrastructures to build alumni services</td><td>Establish infrastructures to build alumni services</td><td>Establish infrastructures to build alumni services</td></tr>
<tr><td rowspan="3">Cases</td><td>Fintech Innovation Lab
Microsoft Ventures Accelerator</td><td>Techstars London
TheFamily
Startupbootcamp Berlin
ProSiebenSat.1 Accelerator
Axel Springer Plug & Play Accelerator
L’Accélérateur</td><td>Climate-KIC Europe
Scientipôle Initiative
Le Camping</td></tr>
<tr><td colspan="2">Healthbox Europe</td><td></td></tr>
<tr><td></td><td colspan="2">Bethnal Green Ventures</td></tr>
<tr><td>Representative quotes</td><td>"It is more a service to strengthen our relationships with the banks" [FIL, Nov 2013]
”With Microsoft you have unparalleled access to customers, because we are still relevant and big in every small and midsize enterprise.” [MVA, Nov 2013]</td><td>"The goal is to generate positive returns from our investments" [PSSA, Nov 2013]
“We do it because we really would like to have a good investment case… So when I look back in 8 years, I would like to have two big exits because then everything we did here is fine. We help them with contracts, follow-up investment, so we are also investment bankers.” [ASPP, Nov 2013]
“We want to create more exit opportunities… we are privately funded by investors” [SBC, Nov 2013]</td><td>"Get the economy going with social impact start-ups. It's not just about investing in start-ups" [BGV, Oct 2013]
“The most important thing is to create sustainable start-ups in the long term… about 200 jobs have been created” [LC, Dec 2013]</td></tr>
</table>

Figure 3: Design elements and constructs



STUDY 2

HOW TO WIN OVER EMPLOYEES' HEARTS AND MINDS: BUILDING INTERNAL LEGITIMACY

3. HOW TO WIN OVER EMPLOYEES' HEARTS AND MINDS: BUILDING INTERNAL LEGITIMACY

Abstract

This study answers the pertinent question of how innovative ventures gain legitimacy from employees and builds on the evolving literature on organizational legitimacy. Through an in-depth case study of a successful, innovative start-up, internal legitimacy, i.e. the employee considering the organization as worthwhile to be committed to, is identified as the result of both founders' actions and employees' assessments. We find that congruence between the employees' objectives for being part of the organization and the actions taken by the founders to pursue legitimacy is a precondition for effective internal legitimacy building. We further distinguish between normative and cognitive actions to build internal legitimacy and illustrate the impact of both. We contribute to the emerging literature on organizational legitimacy by isolating the employee as a distinct audience to attend to in organizational legitimacy building and by providing a bridge between the actor- and audience centred views.

3.1. Introduction

"The main thing is to keep the main thing, the main thing: we've got our people"

(CEO of GradFutures).

Extant literature argues that one of the most important challenges for new ventures to grow is acquiring and managing the appropriate resources (Sirmon, Hitt, & Ireland, 2007; Zimmerman & Zeitz, 2002; Zott & Huy, 2007, Khaire, 2010). Organizational legitimacy, being the social judgment of acceptance, appropriateness, and desirability of an organization (Suchman, 1995), plays a key role in this resourcing process (Aldrich & Fiol, 1994; Sine, David, & Mitsuhashi, 2007; Zimmerman & Zeitz, 2002). In lack of an operating history, proven track record or other tangible factors that can help resource providers to assess the viability of the venture, organizational legitimacy enables new ventures to access and maintain resources (Zimmerman & Zeitz, 2002). Yet, for exactly the same reasons, building legitimacy is particularly challenging for innovative, new ventures.

Scholars in the legitimacy literature have provided insights into different strategies to gain legitimacy (Tornikoski & Newbert, 2007; Zimmerman & Zeitz, 2002; Sine et al., 2007; Tost, 2011; Erkama & Vaara, 2010), However, these scholars have almost exclusively focused on external stakeholders, such as external investors (Nagy, Pollack, Rutherford, & Lohrke, 2012; Pollack et al., 2012; Zott & Huy, 2007), customers (Lamberti & Lettieri, 2011; Dougherty & Heller, 1994), or the public (Lounsbury & Glynn, 2001; Pollock & Rindova, 2003; Ruebottom, 2013). As a consequence, we have little understanding of how organizational legitimacy is gained from internal stakeholders, such as employees. Because of this shortcoming, the main research question addressed in this paper is: "How do new ventures obtain organizational legitimacy from *their employees*?"

Understanding how new ventures can gain legitimacy from their employees (i.e. establish internal legitimacy), is crucial, as employees are an important (if not *the* most important) resource provider for the success and growth of an organization (Bitektine, 2011; Drori, Honig, & Sheaffer, 2009). No organization can accomplish its goals without the full commitment and buy-in of competent personnel. For new, innovative ventures in particular, human resources are an important source of a sustained competitive advantage, as they represent the "lifeline" of small ventures (Cardon & Stevens, 2004; Wright, Dunford, & Snell, 2001; Wright, McMahan, & McWilliams, 1994) and are often cited by new venture managers as "their most important asset". Yet, empirical and theoretical studies about the distinct process of building legitimacy towards employees are lacking (Uberbacher, 2014).

The extant literature on organizational legitimacy primarily focuses on a variety of legitimation mechanisms towards external stakeholders, such as conforming to established practices (Tornikoski & Newbert, 2007; Zimmerman & Zeitz, 2002), obtaining external certification (Sine et al., 2007), highlighting founders' credentials (Nagy, Pollack, Rutherford, & Lohrke, 2012; Pollack et al., 2012) and the use of rhetorical strategies (Cornelissen, Clarke, & Cienki, 2012; Erkama &Vaara, 2010), and is mainly divided between two perspectives. The actor-centred perspective, regarding the entrepreneurs or managers as controlling the legitimacy building process, and the audience-centred perspective, highlighting certain characteristics new ventures have to conform to, hence regarding the audience as controlling the legitimacy building process. Existing legitimacy studies are either actor-centred or audience-centred focused, respectively concentrating on entrepreneur's actions constructing legitimacy versus new ventures' attributes determining legitimacy.

Since we cannot simply assume that these identified mechanisms and perspectives also hold for employees, we lack insights in the internal legitimacy building process. We therefore opt for a single case study approach of a special venture, particularly suitable to investigate the internal legitimacy building process (Siggelkow, 2007). The case under study is a successful innovative venture of five years old that is headquartered in London. The company is selected because it has been able to gain legitimacy from an exceptionally large number of highly qualified employees at an early age (more than 200 full-time employees were working for the company at the moment of selection (i.e. beginning of 2012)). We followed this venture over the course of its lifetime to unpack the entire process of internal legitimacy building, using participant observation, interviews and privileged access to a large amount of company data as primary data sources.

We find that the way in which legitimacy is gained from employees is different from external stakeholders and point to the differences between both. While external legitimacy building tries to portray the unknown as familiar, resembling established practices; we find that internal legitimacy building focuses on the unique, distinct characteristics of the company. We show that internal legitimacy building is a two-way process, in which both the actor and audience are involved, with no dominant player leading the internal legitimacy building process. We introduce the concept of "goal congruence" as the fit between management actions and employees' goals, and demonstrate that this is a core condition to effectively build internal legitimacy. We contribute to the legitimacy and identity literature and have particularly insightful implications for the managers of new, innovative start-ups.

3.2. Theoretical background

Organizational legitimacy was first defined by Suchman as "a generalized perception or assumption that the actions of the organization are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman, 1995, p. 574). Key to the concept of organizational legitimacy is that it represents an assessment of an organization by a particular audience, with the important consequence of the improved ability to acquire resources (Deephouse & Carter, 2005; Zimmerman & Zeitz, 2002).

The daunting challenge for organizations to acquire legitimacy from resource providers is a popular topic among management scholars. Extant organizational legitimacy literature identifies specific legitimacy typologies, whereby a distinction is made according to the type of legitimacy (cognitive, normative and pragmatic) (Suchman, 1995) and level of analysis (organizational, intraindustry and interindustry) (Aldrich & Fiol, 1994). However no distinction is made according to the target audience (from whom does the organization want to gain legitimacy?). Existing studies theoretically and empirically lump all resource providers together into the aggregate concept of "stakeholders" or "organizational environment", with an almost exclusive focus on external stakeholders (investors, customers, public and government). How innovative ventures can gain legitimacy from internal stakeholders (employees) is barely addressed.

A potential reason for the lack of attention given to internal legitimacy is that not all audiences are considered as equally important for organizations to gain legitimacy from. The most obvious audiences to attend to for growing a business are those who have to finance the venture (financers) (Certo, 2003; Rao, Greve, & Davis, 2001), buy the product or service (customers) (Shepherd & Zacharakis, 2003), or those who establish the rules that determine the way ventures in a given domain should perform their activity (media, regulators) (Bansal & Clelland, 2004; Baum & Oliver, 1991; Deephouse, 1996; Pollock & Rindova, 2003; Rao, 2004). Yet, for an innovative new venture acquiring legitimacy from employees is particularly important, since a new way of doing businesses does not only have to be approved by the external audience, but also has to be adopted, supported and eventually executed by the internal audience.

Drori and Honig define internal legitimacy as “the acceptance or normative validation of organizational strategy through the consensus of its participants, which acts as a tool that reinforces organizational practices and mobilizes organizational members around a common ethical, strategic or ideological vision” (Drori & Honig, 2013, p. 347). We build further on this idea and define internal legitimacy as “the state in which the new venture’s strategy has become deeply ingrained in the mindset of the employees and results in a widespread *understanding*, *acceptance* and *enactment* of how the venture should operate.” The three features of internal legitimacy, understanding, acceptance and enactment, are key to the definition and measurement of the concept, and enable to delineate internal legitimacy as an, albeit related to other concepts, distinct organizational construct. *Understanding* refers to the simple knowledge of the venture’s strategy, whereby employees are aware and comprehend how the venture operates. *Acceptance* implies that employees agree with the venture’s strategy and consider it as the best possible strategy to accomplish the venture’s goals. This means that they truly believe that the way in which the company does business is actually the best way in which the company could do business. Finally, *enactment*, referring to internal legitimacy’s “action-generating” properties is the most essential definitional feature of the three features noted above. Enactment means that in addition to facilitating understanding and the initial adoption of the venture’s strategy, internal legitimacy also guarantees a persistent implementation of the venture’s strategy. Enactment entails a “deep adoption” of the venture’s strategy and results in employees as active agents of it.

In this way, internal legitimacy can be considered a distinct organizational construct, different from related concepts such as organizational identity and organizational culture (see table 4 for a comparison). While organizational identity is conferred based on ideological reasons and is related to the organization’s character or “self-image” (Corley & Gioia, 2004; Gioia, Patvardhan, Hamilton, & Corley, 2013), internal legitimacy requires an instrumental or logical explanation and is related to the venture’s strategic direction. Consequently, internal legitimacy may play an enhancing or hindering role in framing the organization’s identity and vice versa. Internal legitimacy also differs from organizational culture, as organizational culture is, similar to organizational identity, based more on ideological than functional reasons. Moreover, while organizational culture can be autonomously rooted in organizational practices, internal legitimacy is inherently relational and hence rooted in the employees' assessments (Ravasi & Schultz, 2006).

While there is little question that acquiring internal legitimacy is critical for successful organizational functioning, the way in which innovative ventures can achieve internal legitimacy is less straightforward. Existing studies about legitimacy building in general are primarily divided between two perspectives: the audience- and actor-centred perspective. Participants of the audience-centred perspective regard the audience as controlling the legitimation process and focus on the identification of the determinants or sources of organizational legitimacy. Institutional theorists for example argue that organizations are judged legitimate when their attributes are in line with other legitimate institutions or represent favourable attributes that signal potential success of the venture, such as certificates, media coverage, professional structures or founder experience (Karlsson & Honig, 2009; McKendrick & Carroll, 2001; Sine et al., 2007). Adherents of the actor-centred view, however, argue that new ventures usually lack tangible predictors of success and therefore rely on the entrepreneurs' ability to actively pursue or construct legitimacy. Impression management and entrepreneurship theorists have identified a number of legitimation strategies or mechanisms to actively shape the legitimacy assessments of audiences. These range from gaining legitimacy through conformance (Aldrich & Fiol, 1994), the use of discursive means (Cornelissen et al., 2012; Golant & Sillince, 2007; Suddaby & Greenwood, 2005) and symbolic actions (Zott & Huy, 2007), to the adoption of new practices (Rao, 2004) and the selection, manipulation and/or creation of the environment (Zimmerman & Zeitz, 2002).

In line with the actor-centred view, entrepreneurs may use strategies and actions, similar to the ones identified for external stakeholders, to build internal legitimacy. Likewise, building on the audience-centred view, employees might share similar bases with external stakeholders for judging a new venture's legitimacy. However, the different contexts, motivations and expectations of external stakeholders and employees with regard to the focal venture suggest the opposite. We can tap onto the existing knowledge about how legitimacy is created for external stakeholders but identifying what exactly distinguishes internal from external legitimacy and providing clear insights on how new, innovative ventures can acquire internal legitimacy is necessary to provide a comprehensive view of the legitimacy building process. By addressing this research gap, we answer the call of Uberbacher (2014) to challenge the taken for granted, but "coarse-grained" and rather one-sided assumption by legitimacy scholars that a new venture's audiences share the same legitimacy judgements. In his review Uberbacher explicitly recognizes that this should lead to investigations of how legitimacy judgements differ among different types of audiences.

Insert table 4 about here

3.3. Methodology

We use an in-depth case study (Eisenhardt & Graebner, 2007) of PERFECTSTAY (a pseudonym) to investigate the internal legitimacy process. We have access to a particularly large amount of data provided by 3 main data sources: (1) participant observation, (2) interviews, and (3) extensive archival data from the start of the company in 2010 until now. We employ a process approach to shift attention from established legitimacy to the processes through which legitimacy is established (Suddaby & Greenwood, 2005; Vaara & Monin, 2010) and engage in several rounds of coding to understand the complex, and often subtle meaning-making processes through which internal legitimacy is established (Golant & Sillince, 2007).

3.3.1. Research setting

The venture under study, PERFECTSTAY, was founded by the current CEO at the end of 2009. Inspired by a friend's recommendation about travel accommodation and in the midst of the boom in home exchanging, the CEO got the idea of opening an "unhotel". The unhotel would have to give travelers the chance to stay in someone's place while they're out of town, but at the same time provide similar services as a hotel. The aim was to target upscale, distinctive houses and apartments in London for which a premium price can be charged in order to account for the additional services provided. The CEO teamed up with 2 cofounders to make this happen and in March 2010 they welcomed their first guest. The company behind this idea was officially launched in May 2010 with six private homes available. During the first 6 months another 50 homes were added to the company, to arrive at a total of 100 homes listed in June 2011. Around the same time and approximately 1 year after founding (March 2011), the company realized a Series A round of funding of $3,7 million. Another year later they launched in New York (May 2012), short after which they realized a second round of funding of $12 million to support the New York launch and other international expansion plans (June 2012). The trend continued and towards the end of the year (September 2013) the company expanded to Paris and Los Angeles. The company currently manages over 2000 exclusive homes in London, New York, Los Angeles and Paris. It employs more than 250 full-time employees in the 4 different countries and a pool of around 1000 contract workers for supporting tasks.

PERFECTSTAY is an innovative venture as it offers an accommodation service, unique to the hospitality industry. On the one hand the company rents out private properties to leisure and business travellers, like other private accommodation service providers, such as Airbnb, HomeAway, VacationRentals etc. On the other hand, they also offer high-end, unique services, similar to the services of a hotel. Each home is cleaned and prepared before and after a stay and equipped with luxury amenities such as high quality linen and toiletries. The guests are welcomed at the homes and lent an iPhone for the duration of the stay. A maid service is provided, together with 24/7 assistance. After each stay the house is cleaned again and put back in its original condition. By offering a private accommodation, combined with distinct services, the company has a unique value proposition and differentiates itself from both private accommodation providers and hotels. The company's business model lies somewhere between that of a vacation home rental service and that of a hotel, as they have “more beds than the Ritz, Savoy, and Dorchester hotels put together, but nowhere near the capital expenditures involved in building an upscale hotel.”

We chose this company to investigate internal legitimacy building as we feel PERFECTSTAY is what Siggelkow (2007) refers to as a “talking pig”. Siggelkow (2007) argues that it is acceptable to choose a single case when it is special in the sense of “allowing one to gain certain insights that other organizations would not be able to provide”. We consider PERFECTSTAY to be such a case for two reasons. First, as described above, the company is a pioneer in the hospitality industry in an aggressive and successful way. Although the company has a new, and thus invalidated, value proposition and operates in a way that is unknown to the hospitality industry, the company already realized 2 rounds of VC funding ($16 mio in total), was featured in press as a high potential company (f.e. the company was listed in The Future 50, a list of the most exciting ground-breaking firms, under four years old and across all sectors in UK) and recently welcomed its 250th full-time employee. This makes us believe that, at the moment of selection, the company had gained legitimacy from financial investors, public opinion holders and employees, to at least some extent. Second, the company is special in the sense that it has a novel concept, which requires the legitimacy from a particularly large amount of employees. Due to the highly personalized value proposition and ambitions to expand internationally, PERFECTSTAY’s business model is particularly labour-intensive. In summary, since PERFECTSTAY has particularly high incentives to build internal legitimacy and is successful in doing so, we are convinced it is the talking pig that will enable us to solve our research question (Siggelkow, 2007).

3.3.2. Data collection

The data collected covers the entire lifetime of the firm (founding until now) and involves (1) a period of intense participant observation, (2) formal and informal interviews and (3) detailed analysis of external and internal documents prior and after the observation period (see table 5 for a complete data overview). The data collection aimed at revealing all “internal legitimacy building activities” of the firm.

The primary data collection can be divided in three broad periods: an introductory exploratory period, a firsthand involvement period, and a follow-up period. The exploratory period started in 2012, two years after the company was founded. During approximately one year (mid 2012 – mid 2013), the author engaged in familiarizing with the company, the product/service it is offering, the industry in which it is operating, and the stakeholders with which it is involved. This included an extensive investigation of different sources such as the company's own website, 56 business press and 187 popular press releases identified through Factiva, publicly available data such as industry reports and financial reports, and 110 minutes of video material (elevator pitches and conference/fare presentations). The first phase also involved attending hospitality industry events, technology fares and formal company presentations. The exploratory period was followed by a more intense involvement period, which lasted approximately one year (mid 2013 – mid 2014) and included a participant observation period of 4 months (Oct 2013 – Jan 2014) and a follow-up period of 6 months (Feb 2014 – Sept 2014). During the participant observation period the author spent three days a week at the company as an intern at the finance team. She spent more than eight hours a day in the field, which resulted in a total observation time of over 450 hours. To comply with the commonly recommended methods for participant observation (Van Maanen, 1979), the author occupied a formal role (cost accounts assistant) in the company, which was unrelated to the research topic. This allowed her to become immersed in the everyday life of the company without influencing the practices that were being researched. Her everyday operational tasks were limited to standardized accounting tasks, which allowed her to play "a fly on the wall" by carefully observing what was going on, on a daily basis. As the focus of this study is aimed at investigating how legitimacy is build for the company among employees, being involved in the day-to-day operations of the company as an employee herself provided the ideal position to do so. It enabled her to gain insights that a pure observer or researcher position wouldn't be able to provide, as it allowed to personally experience the internal legitimacy building process as it were. The employee status further allowed her to communicate with all members of the company as if she was one of them, which resulted in a large amount of insider insights and a very realistic experience of how things were being done at the company. Furthermore it gave her the privileged position of detecting how things were perceived among other employees. During the participant observation period, daily written field notes were produced. These provided a key resource to crosscheck preliminary findings with existing literature to avoid ignoring theoretically relevant knowledge (Suddaby, 2006) and to provide a basis for discussion with the other coder. The participant observation period ended in the beginning of 2014 and was then followed by a third primary data collection period. This follow-up period consisted of a continued involvement in the company by means of regular company visits, follow-up interviews and attendance of formal and informal company events from February 2014 on and is still carried on.

In total, 31 interviews were conducted, all of which where recorded and transcribed (141 single-spaced pages). Initial interviews were conducted with Founder1 and had an open format without structured guidelines. This was done in order to get familiarized with the company and gain trust. After 3 preliminary interviews with Founder1, the participant observer engaged in a formal application procedure for the internship position, which involved 2 rounds of interviews with the three founders (CEO, COO and CTO), an interview with the HR-manager, service development manager and finance manager and a case study exercise. These interviews contributed to the understanding of the company's internal procedures in general and its hiring procedure in particular. After having obtained the internship position, a series of formal interviews were conducted with all employees who worked at PERFECTSTAY for longer than 2 years. This resulted in 13 interviews with people in different roles, which lasted between 30 minutes and 1,5 hours (see table 5, "Interviews - 1st round" for an overview). During these semi-structured interviews, the interviewees were asked to reconstruct their history of PERFECTSTAY, highlighting personal and professional key events and milestones in the evolution of the company (see Appendix 1 for the interview protocol). This initial round of interviews allowed a very detailed reconstruction of the company's history, including events and milestones not covered by publicly available data and provided preliminary insights in the degree of legitimacy being granted to the company by these employees. A second round of interviews involved a random selection of 9 employees (5 back-office and 4 front-office employees), who were questioned about their "entry process" and evaluation of the company they work at. Questions focused on why they had chosen to work for PERFECTSTAY, how difficult it was for them to get accepted, what they value most in their job and their thoughts about the company's performance (see table 5 "Interviews - 2nd round" and Appendix 2 for the interview protocol). The second round of interviews was aimed at revealing the employees legitimacy judgments before and after they joined PERFECTSTAY.

Apart from these formal interviews, many informal interviews with employees and prospect employees were conducted. Informal talks at the work floor during breaks, after work drinks and team events offered additional opportunities to read between the lines and probe about legitimacy judgments. The primary data collection was ended when the author believed that no new relevant information could be gained and "theoretical saturation" had been reached (Corbin & Strauss, 1990).

Finally, secondary data was collected as well during the entire data collection period. As the participant observer was enrolled as an employee of the company, rich data sources were available. First, she had access to the company's monthly "all-staff meetings", which were introduced mid-2013. Every first Monday of the month a meeting across all countries is organized, which each staff member has to attend. These "all-staff meetings" last around half an hour to an hour and are designed to discuss monthly updates across the entire company. As these meetings are held through video-conferencing, she had access to the recorded video materials of 12 meetings (Oct 2013 – Oct 2014), five of which were joined in person (Oct 2013 – Feb 2014). Second, she had access to the company's internal blog, which was created one year after founding and strictly accessible for employees. The blog is created for and by employees and covers formal as well as informal topics, such as the introduction of new members, departmental updates, reports on social events, company announcements etc. As the blog is updated regularly and serves as a popular communication tool among employees, it is an extremely informative data source to understand internal legitimacy building. Finally, several other internal information was available, including company-wide emails and newsletters, PowerPoint presentations, the HR-platform, employee satisfaction surveys etc. to serve as a triangulation source (Jick, 1979).

Insert table 5 about here

3.3.3. Data analysis

Our data analysis approach was "abductive" (Dubois & Gadde, 2002; Van Maanen, Sorensen, & Mitchell, 2007), meaning that we entered the field with certain theoretical formulations in mind about how internal legitimacy is built, and constantly refined our theoretical ideas as we progressed through the data analysis. The analysis involved two coders (the participant observer and a second researcher) and proceeded in three stages.

In the first stage, consistent with our research question, both coders independently went through all the available data to extract any information related to internal legitimacy. Once all internal legitimacy relevant information was selected, we further screened the data to identify anything that qualified either as an action to build internal legitimacy (= legitimation action) or an organizational attribute that yields internal legitimacy (= legitimizing attribute). Something was coded as a legitimation action or legitimizing attribute if it was either identified by both coders or confirmed by the founders/employees to qualify as a legitimation action or legitimizing attribute respectively. Each of the coders independently performed the open coding of the selected data, which resulted in an initial list of over 70 legitimation actions and 50 legitimizing attributes. We compared all the codes and discussed any disagreements. If we didn't come to a consensus about an action or attribute, we dropped it. As a result, the final coding agreement was 100 percent about a list of 61 legitimation actions and 34 legitimizing attributes.

In the second stage we grouped the codes together in broader categories, using a process similar to Corbin & Strauss' notion of axial coding (Corbin & Strauss, 1990: 123). We followed the same approach of the first stage to secure inter-rater reliability and continuously crosschecked the emerging categories with theoretical findings of the legitimacy literature to avoid ignoring theoretically relevant knowledge (Suddaby, 2006). Where appropriate, we used Nvivo, a qualitative data analysis program, to support our axial coding process. The second stage ultimately resulted in respectively 5 and 3 agreed upon categories of legitimation actions and legitimizing attributes.

In the third and final stage we compared and linked the two sets of categories with each other. This allowed us to gain insights and draw conclusions about both the drivers and effects of the internal legitimacy process at PERFECTSTAY and to provide an answer to our research question.

3.4. Findings

We find that internal legitimacy is the result of a two-way process. Our data shows that the founders of PERFECTSTAY use legitimation actions to actively construct legitimacy (in line with the actor-centred perspective), while at the same time employees use legitimizing attributes to grant legitimacy to the company (in line with the audience-centred perspective). In what follows we describe both processes in detail, by intertwining a narrative of our observations with insights generated through a detailed analysis of the documents to which we had access (Eisenhardt & Graebner, 2007). Selected quotes and other data supporting our emerging interpretations are displayed in table 6 and 7.

3.4.1. Internal legitimation: the process of constructing legitimacy by the founders

Our data reveal that the founders of PERFECTSTAY make use of several techniques and actions to actively construct internal legitimacy. This *legitimation* process is in line with the actor-centred perspective and emphasizes the process of legitimacy *construction* (Drori et al., 2009; Tost, 2011). Internal legitimation actions are strategies employed by the founders to make the organization appear legitimate to employees. They can be seen as socialization tactics, used to teach and reinforce desired behaviour among employees, but with the particular aim to acquire legitimacy. We identified a wide variety of legitimation actions, which were grouped into five categories.

3.4.1.1. Stressing achievements and palliating failures

Our data show that the founders of PERFECTSTAY skilfully and purposefully select the information that employees receive about the organization's performance. This information regulation (Rouleau, 2005) is aimed at constructing a favourable and legitimate image of the company. For example in the all-staff meetings (cfr. infra) positive issues are frequently emphasized, while negative issues are mitigated. Although these meetings are designed to provide objective updates about the company's progress, positive facts (for example performance measures that score best in that month, record bookings etc.) are filtered and emphasized, while softening dimensions are chosen to communicate less beneficial facts (for example through the use of euphemisms or soft adjectives). In this way the founders try to gain internal legitimacy by giving an overly positive image of the company's performance.

3.4.1.2. Securing employee satisfaction

Considerable efforts are made to install a pleasant working environment at PERFECTSTAY in order to secure employee satisfaction. In this context, employee satisfaction refers to employees being satisfied with their job in such a way that they are convinced there is no other organization that can provide them with the same satisfaction, and thus it is legitimate for them to work for this particular organization. In this regard, the founders try to go beyond traditional approaches in order to display the company as an outstanding place to work. Examples are providing a special budget to organize social events, locating a ping pong table in the middle of the office and encouraging cross team table tennis contests during breaks, using sofas instead of chairs to create a relaxing working environment and sending out weekly staff surveys to signal that employee satisfaction is measured and thus considered. Moreover, the symbolic dimension of providing atypical perks is particularly exploited. The founders emphasize the presence of non-standard perks, as they believe it contributes to the employees' perception of the company's legitimacy, by signalling the ability to spend money on non-core activities.

3.4.1.3. Keeping employees informed

Our data reveal several channels designed by the founders to keep employees informed and to offer them the opportunity to learn about the company's performance. As discussed before, the all-staff meetings are particularly designed to inform employees about the company's progress. However, other channels are offered as well. To stay up to date, employees have the possibility to subscribe to internal newsletters on various topics, emailed on a weekly basis. The internal company blog is frequently updated with important company events and activities and biweekly workshops are organized during lunchtime to discuss new company projects. By offering explicit channels to be aware about the company's progress, the founders want to signal to its employees that it is being transparent about its performance and employees should have nothing to worry about. Employees are kept informed to avoid them questioning the company's legitimacy.

3.4.1.4. Installing a distinct organizational identity

The founders aim to install a distinct organizational identity. The organizational identity imposed by the founders reflects the image of a quirky company that wants to offer an exceptional, mysterious experience to its customers. To achieve this particular organizational identity, six values, based on this quirky image, are distilled, and presented as the core values of the company. Lots of efforts are done to communicate and present the values as guiding principles for appropriate behaviour. They are displayed in an old-school paper journal, printed on a poster and frequently repeated during internal meetings. Each employee has to follow a "value and culture" workshop, during which the brand manager reveals the six values and explains what they mean, and it is regularly emphasized that actions at every level should embed all values. The quirky organizational identity is further emphasized by, amongst other things, using winged language during internal communication, choosing playful job titles referring to adventurous characters and organizing thematic social events. The founders use this distinct organizational identity as a legitimating strategy, by emphasizing its sense giving function about how the employees should relate to it. Through a distinct identity claim, the founders attempt to influence how employees define and interpret the organization by locating it within a legitimate social category.

3.4.1.5. Communicating legitimizing feedback

Feedback received from other (external) stakeholders is regularly communicated to the employees, in order to influence employees' perception about the company's legitimacy. Social media statistics (such as number of followers on Twitter and Instagram or Facebook page likes) are explicitly mentioned during all-staff meetings, company press releases are ostentatious presented at the office walls and positive feedback from guests and hosts are frequently included in the weekly newsletters. Receiving legitimizing feedback pertains to the employees' beliefs that the company is found to be legitimate by external stakeholders. By demonstrating that other, external stakeholders grant legitimacy to the company, the management wants to affirm it makes sense for the employees to grant legitimacy to the company as well.

Insert table 6 about here

3.4.2. Internal legitimizing: the process of allocating legitimacy by the employees

Our data further reveals that, in addition to the founders using actions to actively pursue legitimacy, employees are also active players in the internal legitimacy building process. Employees actively evaluate the organization for certain attributes, which have to conform to their legitimacy criteria, in order for them to grant legitimacy to the organization. This means that the employees have certain characteristics and criteria in mind, which the organization has to comply with, for them to assess the organization as legitimate. Only if the organization's attributes fit their criteria, the organization is judged legitimate. This *legitimizing* process relates to the audience-centred perspective, which portrays the audience in control of the legitimacy building process (Tost, 2011). We used the employee interviews to identify the criteria used by the employees of PERFECTSTAY and identified several legitimizing attributes, which were grouped into three categories.

3.4.2.1. Smart people

Our interview data reveal that one of the primary conditions that must be satisfied for the employees to confer legitimacy to the company relates to the people that work in the company. There is a generally held belief among the employees that only very skilled people, with exceptional educational achievements and great expertise are working at PERFECTSTAY. As laconically remarked by one of the employees during lunch break "even our kitchen-conversations outperform an average TEDx talk". This perceived high calibre of their peers, the management and founders serves as a solid foundation for the employees to judge PERFECTSTAY as legitimate. It signals that the founders carefully screen and select potential candidates and hence being an employee of PERFECTSTAY should feel as being elected to be part of an exceptional team. Moreover, the fact that the company succeeds in attracting a high-calibre, qualified workforce only reinforces the employees' legitimacy judgement as it provides evidence that fellow employees share their legitimacy opinion.

3.4.2.2. Learning opportunities

A second legitimizing attribute observed among the employees concerns the perception of PERFECTSTAY to be the exquisite environment to learn how to successfully launch a new venture. A lot of people working at PERFECTSTAY want to start their own business at some point and consider the company as a training ground to learn how companies are built from the ground up. The fact that the organization is a young, successful start-up company, which proved to have survived the difficult start-up phase, signals to the employees that the company has the right profile to teach them how to start a successful business on their own. These unique learning opportunities contribute to a positive legitimacy judgement, as the employees consider the organization to be beneficial for their career prospects.

3.4.2.3. Operational efficiency

The final legitimizing attribute relates to the employees viewing PERFECTSTAY as an operationally efficient organization. All employees recognize operational efficiency as one of the key characteristics of PERFECTSTAY. Organizational attributes signalling operational efficiency, such as the consistent achievement of high sales targets, positive customer feedback, ambitious financial forecasts etc.

serve as legitimacy sources to the employees as they consider it to be an indication that the company is operationally efficient and hence focuses on relevant matters only. The fact that the company is operationally efficient and cares about strong performance, qualifies as a source of legitimacy for the employees, as it implies that the company has the right characteristics to benefit them.

Insert table 7 about here

3.4.3. Internal legitimacy building at PERFECTSTAY

In what follows, we draw conclusions about the internal legitimacy building process at PERFECTSTAY by linking the legitimation actions to the legitimizing attributes identified above. Comparing the internal legitimation process with the internal legitimizing process allows drawing insights about the way in which internal legitimacy is established at PERFECTSTAY (see figure 4 for a graphical representation).

Further analysis of the internal *legitimation* process reveals that the founders make use of two different types of legitimation actions. We distinguish between two sets of legitimation actions, both with a different impact on the internal legitimacy ultimately obtained. On the one hand, PERFECTSTAY's founders use a set of legitimation actions explicitly organized around the six core values of the company (cfr. infra). These actions include "securing employee satisfaction", "installing a distinct organizational identity" and "communicating legitimizing feedback". As illustrated by table 6 and the following quote of the CEO in one of the all-staff meetings, these three categories consequently refer to the six values and emphasize the normative approval of the company.

> *"Many of you already know we are constantly working on describing and defining our culture, who we are. You may have seen the six values already, the newspaper stuff; I have it here in front of me if you haven't seen it before. We hope that this will form the basis for training and performance management. They are really crisp, very simple to communicate and even easier to understand. However, if anyone in the company doesn't understand what any of these values mean, and what any of the behaviours, which qualify them mean, ask someone, ask me if you want. And if you don't understand them, we'll*

explain them and we'll keep explaining them, because it's really important that we all know what we stand for in this company."

Since these actions are explicitly build around the company's core values, are used to give sense about desired behaviours and imprint organizational attributes reflecting the most appropriate way of doing business, they are aimed at the creation of what Suchman (1995) refers to as "normative" legitimacy, i.e. legitimacy based on a positive normative evaluation of the organization and its activities. Hence, we define these actions as "normative legitimation actions" as they are focused on achieving normative approval from employees.

The second set of legitimation actions on the other hand, including "stressing achievements and palliating failures" and "keeping employees informed", are not explicitly designed around the six core values, but rather focus on success and performance. They are aimed at enhancing employees' knowledge and comprehensibility of the company's functioning. These actions are no coherent, clear, or even entirely conscious strategies, but result from a web of tactics intrinsically interwoven in the daily operations of the company. They are particularly present in the all-staff meetings but are anywhere embedded in the company's multiple routines and conversations. These actions are more hidden or tacit tactics, aimed at developing commitment to the end goal of the company, i.e. to become a sustainable and successful organization. The underlying tone of the all-staff meetings and the internal operations in general is one of efficiency, hard work and performance. For example, the all-staff meetings make use of a standard format, whereby each monthly update is presented as a narrative that consequently plots the desired end state of PERFECTSTAY as a profitable company and further focuses on the intermediary steps that will lead to this desired outcome. The overall focus on a profitable company as an end state is clearly displayed in the following quote from the CEO during an all-staff meeting as well:

"We need to focus on getting the basics right. If we can get these right, it means we can continue to grow this speed and we can build a successful company… as well as a very big one! We are still a young company and we are still a very fast growing company. But we are also a growing up company, and we are growing up to a real business."

Since these actions focus on the spread of knowledge about the organization and on increasing comprehensibility, they are, by definition, aimed at achieving "cognitive" legitimacy, i.e. legitimacy related to the taken-for-grantedness of a new form (Ashforth & Gibbs, 1990; Barron, 1998; Foreman & Whetten, 2002; Suchman, 1995). Hence, we refer to "cognitive legitimation actions" as actions focused on achieving cognitive approval from employees.

Insert figure 4 about here

If we then turn to the employee side and take a closer look at the internal *legitimizing* process, our analysis reveals different legitimizing attributes. The legitimizing attributes observed at PERFECTSTAY (smart people, learning opportunities and operational excellence) relate to sustainability, performance and success. The employees at PERFECTSTAY grant legitimacy to the company because it is perceived as successful, sustainable and efficient and is therefore being responsive to their primary interests (i.e. being part of and learning from a high-potential, successful company). The legitimizing attributes are company characteristics that relate to the potential of the company to provide beneficial trade-offs to the employees by meeting their pragmatic interests, rather than because it coincides with their norms and values. This is further demonstrated by the following quotes from different employees:

> *"We are pretending to be cool, unique, quirky, but the thing is, we're not actually a quirky company, we are not run by cool people, but we like to pretend we are because we're selling cool to the people. I often think we are just hard-working academics who try to replicate what cool looks like… it's just not naturally cool."*

> *"Name the company's core values? Oh, my gosh! I think there's six? Don't we call them the 'magic six'? There should be six…"*

> *"As soon as you're in it, you realize it's not actually that special. It's a straight line hard working business, no on really pisses around very much, it's just really hard work."*

We conclude that there is no dominant perspective in the internal legitimacy process. Internal legitimacy is the result of a two-way process in which both parties (founders and employees) play a role and should equally be taken into account. In the case of PERFECTSTAY the founders seek to gain internal legitimacy through the use of two different sets of legitimation actions, one focused on norms and values and another on success and performance. However, only the second set of legitimation actions (focussing on success and performance) seems to be effective. This is again illustrated by the following quotes from two employees:

> *"To be honest, I personally don't know the core values well enough, but from all the talks they do and the efforts they put in it, I would think it is important for them [...] but internally to me, I don't care enough about it to really believe it. The fact is that it doesn't really affect my job, it doesn't affect my performance or my development, and so that is maybe why I'm not as involved with it. [...] I'd rather like to know about the company's success, how it is doing financially, than know about its norms and values..."*

> *"There is a clear difference between what the company is trying to portray and what it is trying to achieve. The first is a quirky, cool, distinctive company, which is relevant for our customers, the latter is being a pioneer in the sector of travel, which is relevant for me."*

As the employees of PERFECTSTAY do not necessarily put a normative evaluation on the organization's activities, but rather assess the organization from a pragmatic point of view, we conclude that the legitimation actions that focus on the employees' goals and drivers to be part of the organization are effective, while actions that do not particularly emphasize these goals aren't. This highlights the importance of a match between the organization's characteristics that are valued by the employees and the focus of the actions used by the founders. In order to arrive at internal legitimacy, the action's goal has to be aligned with the employee's goal. Only when both goals converge, internal legitimacy is obtained. We refer to this as *"goal congruence"*, *which is the match between an employee's goals on one hand and the legitimation action's goals on the other hand*, and put this forward as a core condition to achieve internal legitimacy. However, this doesn't imply that the legitimation actions focusing on different goals are redundant, they might have a (positive) impact on other organizational results, but, in the study reported here, legitimation actions relying on pragmatic attributes such as functionality, performance and success, which are in line with the employee's primary interests, more effectively foster internal legitimacy than those relying on normative attributes.

3.5. Discussion and conclusions

The findings outlined above suggest that gaining legitimacy from stakeholders is anything but a unilateral process. Our study shows that companies have a great deal to gain by explicitly taking into account the particular audience they want legitimacy from. The internal legitimacy building process is a distinct process, going beyond traditional external legitimacy building, and highlights goal congruence as a key condition to effectively establish legitimacy among employees.

3.5.1. Theoretical implications

We contribute to the legitimacy literature in three ways. First, by isolating internal stakeholders as a distinct group to build legitimacy for and contrasting the internal legitimacy building process with established findings about external legitimacy, we counter the taken for granted assumption that building legitimacy is the same for all stakeholders. We find that effective external legitimation mechanisms, such as conforming to established practices, highlighting familiarity, use of symbolic actions etc. do not necessarily work for employees. Earlier studies have shown that external stakeholders predominantly grant resources to the organization based on cognitive legitimacy, i.e. legitimacy based on an assessment of comprehensibility or taken-for-grantedness (Suchman, 1995). However, for employees, comprehensibility or taken-for-grantedness is not enough. Employees not only have to view the venture as legitimate to decide to grant their resources to the venture, they also need to be committed to the venture, participate in it for an extended period of time and actively support it. In addition to initial acceptance, internal legitimacy goes hand in hand with persistent support and endorsement of the venture over time. Hence, in the context of internal legitimacy building, we observe a shift in focus from the conventional to the unconventional. Distinctive characteristics about the company such as success, performance, norms and values are the focus of internal legitimation actions, in order to establish employee "buy-in". While external legitimation actions focus on what's familiar and frame the venture, often through metaphors and analogies, in terms that are understandable and thus legitimate (Pollock & Rindova, 2003; Cornelissen et al., 2012), internal legitimation actions try to distinguish the venture from existing players in the field, in order to be able to compete for the same pool of talent. They do so by emphasizing the venture's unique and differentiating characteristics. External legitimacy implies making the unfamiliar, familiar; internal legitimacy implies making the unfamiliar, particular.

Second, we contribute to the legitimacy literature by delineating and extending the concept of "internal legitimacy". Aside from Drori & Honig's study in 2013, internal legitimacy received limited research attention as a phenomenon so far. We contribute to this shortcoming by explicitly focusing on internal legitimacy as the subject of this study and by providing a refined definition of internal legitimacy, consisting of three measurable pillars (i.e. understanding, acceptance and enactment of an organization's strategy). In addition to an increased understanding of the concept, this definition provides a tool to investigate the presence of internal legitimacy in an organization. Moreover, it enables distinguishing internal legitimacy from related concepts. Other studies have already noted the importance of similar organizational concepts such as organizational identity (Navis & Glynn, 2011) and organizational culture (Ravasi & Schultz, 2006), contributing to the construction and maintenance of internal legitimacy. Our findings support the fact that internal legitimacy is informed by an organizational identity, and then also informs it - the two concepts co-evolving as the organization matures - but further suggest that an organizational identity does not necessarily *enhance* the construction of internal legitimacy. At PERFECTSTAY, the founders of PERFECTSTAY impose a desired organizational identity on the constituents of the organization to provide a coherent guide for how the members of the organization should relate to it. It uses this organizational identity as a legitimation action. Our findings indicate that the employees of PERFECTSTAY perceive the organization as legitimate when the organization is able to execute the purpose for which they are chartered and hence they will benefit personally by continuing to support the venture. Not necessarily because they relate to the organization's ideological vision, norms and values that underpin the organization's identity. Hence, in this case, the organization's identity does not enhance the establishment of internal legitimacy.

Third, by introducing the concept of "goal congruence" as a core condition to internal legitimacy building and by explicitly taking into account both the founders and employees in the analysis, we further contribute to the legitimacy literature by providing a bridge between the actor- and audience-centred views on legitimation. Our findings suggest that neither the actor nor the audience entirely controls the internal legitimacy process. Instead, both sides play an equal role and should equally be taken into account. It is only when the actor's actions to build internal legitimacy converge with the audience's attributes to grant legitimacy that internal legitimacy is reached. With this we react against the established trend of previous legitimacy studies to solely focus on either of the two sides, and close the gap pointed to by Uberbacher (2014: 687) that a comprehensive view is needed, which "requires joining the forces of audience-centred and actor-centred views, which – despite their likely potential – have hardly been utilized in an integrative way."

3.5.2. Practical implications

While there is little question that gaining internal legitimacy is critical for successful organizational functioning, we posit that acquiring internal legitimacy should be addressed within the broader strategy of any innovative new venture. Our findings shows that the actions founders should use to best achieve internal legitimacy are not straightforward and should be tailored to their specific employees. Although the use of legitimation actions focused on norms and values is a traditional management approach to socialize employees, in this study we find that it does not lead to internal legitimacy. Instead, it is more effective to use legitimation actions that focus on the employees' intrinsic objectives to be part of the organization. By emphasizing the importance of goal congruence for internal legitimacy, we do not only highlight the importance for founders to be aware of the employees' primary goals but also to actively seek congruence between the employees' goals and the legitimation actions used. Organizations might obtain goal congruence by selecting employees with the required goals upfront and/or by bringing organizational practices and legitimation actions in line with employees' goals. Although it is theoretically possible to change employee goals, research suggests that this might be a more difficult and less effective approach.

3.5.3. Limitations and avenues for further research

As all studies, ours has limitations as well. This final section aims to outline the particular limits of this study, as they might provide interesting opportunities for further research. First, although a single case study facilitates rich insights, we need to be tentative in generalizing the results. Further research examining the same process of internal legitimacy building in different ventures, with different goals, is needed to further extend our insights about the internal legitimacy building process.

Second, our study focused on one particular sector, so extension to other sectors with different characteristics could be useful as well. Further research, examining other firms in different sectors should focus on finding out whether the internal legitimation actions and attributes are different and whether the same degree and type of internal legitimacy is reached.

Finally, this study has not made a distinction between different types of employees, implying that the legitimacy judgements of all employees were taken together. It is however possible that the employees' legitimizing attributes differ according to certain characteristics such as experience, age, role in the company, etc. Further research could deepen this link and contribute both to the legitimacy and HR literature.

3.5.4. Conclusions

Because of the limitations outlined above and the usual limitations related to a single case, this study should be regarded as a first step in increasing our understanding about the way in which new ventures can obtain internal legitimacy, and, in particular the role of goal congruence in this process. By investigating the legitimation actions and legitimizing attributes that did and didn't result in internal legitimacy, we hope to have provided a more complete lens to understand how new ventures obtain internal legitimacy and believe that these insights open the way for further research into how internal legitimacy can successfully be established.

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Table 4: Internal legitimacy versus organizational identity versus organizational culture

	Internal legitimacy	**Organizational identity**	**Organizational culture**
Definition	"The state in which the new venture's strategy has become deeply ingrained in the mindset of the employees so it results in a widespread understanding, acceptance and enactment of how the venture should operate." Based on Drori & Honig (2013) p. 347 "the acceptance or normative validation of organizational strategy through the consensus of its participants, which acts as a tool that reinforces organizational practices and mobilizes organizational members around a common ethical, strategic or ideological vision"	"Who we are as an organization" (Gioia, et al., 2013) "The shared meaning that an organizational entity is understood to have that arises from its members' (and others') awareness that they belong to it." (Cornelissen, Haslam & Balmer, 2007)	"A set of shared mental assumptions that guide interpretation and action in organizations by defining appropriate behaviour for various situations [...] expressed and manifested in a web of formal and informal practices and of visual, verbal, and material artifacts, which represent the most visible, tangible, and audible elements of the culture of an organization." (Ravasi & Schultz, 2006)
Focus on	Familiarity	Distinctiveness	Distinctiveness
Nature	Functional	Ideological	Ideological or normative
Level	Resides at organizational level; formed at individual level	Resides at organizational level; formed at individual level	Resides at organizational level; formed at organizational level
Perspectives	Actor-centred perspective vs. audience-centred perspective	Social actor perspective vs. social constructionist perspective	/

Table 5: Data overview

PARTICIPANT OBSERVATION NOTES				
Title	***Intended audience***	***Number of pages***	***Date***	***Type***
Induction week	PO	24	10/10/13	P
Finance socials	Finance team	12	7/11/13	I
Prep meetings CEO	CEO	20	6/11/13	P
Notes Org Structure	PO	9	8/04/14	P
Notes Corporate Culture	PO	4	14/08/14	P
Diary	PO	115	28/09/13	P
INTERVIEWS – 1st round				
Interviewee	***Job title***	***Duration***	***Date***	***Type***
Interviewee1	Operations Manager	0:53:06	29/11/13	P
Interviewee2	Head of digital marketing	0:51:35	2/12/13	P
Interviewee3	Director of Service Development	1:25:31	10/12/13	P
Interviewee4	Head of Worldwide Sales	0:36:26	13/12/13	P
Interviewee5	Front of House Manager	0:25:24	17/12/13	P
Interviewee6	Head of Product	0:52:20	19/12/13	P
Interviewee7	Front of House Manager	0:50:08	06/01/14	P
Interviewee8	CTO	0:48:37	27/01/14	P
Interviewee9	HR Manager	1:23:29	28/01/14	P
Interviewee10	HR & Recruitment Lead	0:43:16	28/01/14	P
Interviewee11	HR & Recruitment Lead	1:01:35	28/01/14	P
Interviewee12	Head of PR	0:59:47	31/01/14	P
Interviewee13	Central Operation Manager	00:29:32	03/02/14	P
INTERVIEWS – 2nd round				
Interviewee	***Job title***	***Duration***	***Date***	***Type***
Interviewee14	Financial Assistant	1:11:14	27/01/14	P
Interviewee15	Cities Accountant	1:12:47	27/01/14	P
Interviewee16	Guest Revenue Executive	0:52:21	27/01/14	P
Interviewee17	Accounts Assistant	1:10:29	28/01/14	P
Interviewee18	Global Cost Manager	1:33:59	28/01/14	P
Interviewee19	Host Revenue Executive	0:51:47	03/02/14	P
Interviewee20	Head of Finance	1:00:45	06/02/14	P
Interviewee21	Front of House Manager	0:45:52	08/09/14	P
Interviewee22	Head of People	1:17:56	08/09/14	P
ALL HANDS MEETINGS				
Month	***Video/Audio***	***Duration***	***Date***	***Type***
October 2013	Audio	00:53:32	07/10/13	I
November 2013	Audio	00:45:17	04/11/13	I
December 2013	Audio	00:25:26	02/12/13	I
January 2014	Audio	00:30:17	06/01/14	I
February 2014	Audio	00:42:48	03/02/14	I

March 2014	Video	00:32:16	03/03/14	I
April 2014	Video	00:39:57	07/04/14	I
May 2014	Video	00:43:04	05/05/14	I
June 2014	Video	00:42:37	02/06/14	I
July 2014	Video	00:35:21	07/07/14	I
August 2014	Video	00:29:45	04/08/14	I
September 2014	Video	00:38:47	01/09/14	I
October 2014	Video	00:37:07	06/09/14	I

BLOG

Title	*Author*	*Intended audience*	*Date*	*Type*
Down the Rabbit Hole	Employees	Employees	Entire period	I

EMAILS

Topic	*Sender(s)*	*Intended audience*	*Number*	*Type*
Corporate culture/social	Head of people	All employees	17	I
Product updates	Product manager	Registered employees	114	I
LON weekly Ops updates	GM London	Registered employees	114	I
Finance updates	Finance manager	Registered employees	114	I
Team updates	Head of people	Registered employees	114	I

PPT PRESENTATIONS

Topic	*Title*	*Author(s)*	*Date*	*Type*
Internal pres	Understanding the London operation	Product manager	04/08/13	I
External pres (used at BS)	No title	CEO	07/12/13	E
Brand & Culture workshop	Who are we?	Brand manager	01/1013	I
Cycle to work	Cycle to work scheme	Head of people	09/08/14	I
Staff management platform	The staff management platform	Head of people	03/08/14	I
Lunch & Learn	Sherlock Lunch & Learn	Head of PR	25/07/13	I
Lunch & Learn	Operational product vision	COO	02/10/13	I
Lunch & Learn	The Psychology of Empathy	Head of sales	20/11/13	I
Lunch & Learn	Onefinestay Galleries	Head of sales	24/01/14	I
Lunch & Learn	Marketing: in the digital age	Head of marketing	08/09/13	I
Lunch & Learn	NYC - the story so far	GM NYC	01/04/13	I
Lunch & Learn	Guest segments	Head of sales	19/03/14	I
Lunch & Learn	Guest experience insights	Head of sales	01/07/14	I

STAFF INFORMATION				
Type	***Author***	***Intended Audience***	***Date***	
Corporate Chart	Head of people	Internal	02/04/13	I
Monthly headcount data	Head of people	Internal	Entire period	I
All staff info (Name/division/job title/department/hire & leaving date)	Head of people	Internal	Entire period	I
Performance review report	Cost manager	Finance manager	18/09/14	I
BACKGROUND INFORMATION				
Type	***Author***	***Intended Audience***	***Date***	
Press Releases (243)	Factiva	Public	Entire period	E
Video material (110mins)	PERFECTSTAY	Public	Entire period	E
Company website info	Editiorial team	Public / employees	Entire period	I & E
Timeline	PO	PO + interviewees	Entire period	I
Everline Future 50 list	Everline	Public	04/02/14	E
Future 50 winners	Future 50	Public	10/02/14	E

PO = Participant observer, I = Internal, E = External

Table 6: Legitimation actions

Legitimation action	You should grant legitimacy to PERFECTSTAY because…	Example tools/quotes
1. Stressing achievements and palliating failures	*"We are doing great"*	- There is a gong in the middle of the office the sales team can use to announce over 10K bookings. - A list of "how are we doing on KPIs" is displayed at several walls of the office. - CEO during all-staff meeting: "Just to put that into context, I want to make sure that everyone hears this, so this year alone, we've signed 1000 new members in London. So I just want to make sure that everyone appreciates, because that's an incredible achievement. It looked like a crazy stretched target in Jan so congratulations from everyone." - COO during all-staff meeting: "I know it can be hard at times but it's great to see results like this. It is not our best result ever, however it's only 45000 pounds shy of our best results ever, despite of the 16% drop off in leads, so it's actually a tremendous results." - GM during all-staff meeting: "We are sort of hovering, tantalisingly close to our OKR of + 70 on guest score and have our fingers crossed that over the next few days we see a few more strong scores, which pushes us over the top as it were." - GM of France during all-staff meeting: "This week we had a record level of 8 concurrents and we are going to triple that in the coming weeks."
2. Securing employee satisfaction	*"There is no better place to work"*	- A staff survey automatically pops up at the computer screen of each employee, every Friday at 5PM. It starts with "How are we feeling today?" and closes with "Time for drinks and nibbles!". - Several tools are used to signal a relaxing, informal working environment: a ping pong table in the middle of the office, open floor office space, sofas in the meeting room instead of chairs, free diet coke and fruit in the kitchen etc. - Several social and teambuilding events are organized: team socials on Thursday, yoga on Tuesday, Friday evening drinks and nibbles, bake contests for charity, etc. - Every month there is a celebration of " the best troubleshooter of the month". - Each employee is offered a party in one of the most expensive homes when a fixed term contract is obtained.
3. Keeping employees informed	*"We have nothing to hide"*	- There is a mandatory induction week for each newcomer, during which he or she meets and shadows the different departments of the company. - Every first Monday of the month an all-staff video conferencing meeting is organized to provide updates of the previous month and announce important events and activities of the following month. - Employees can register to receive weekly newsletters providing product, financial, operational and team updates.

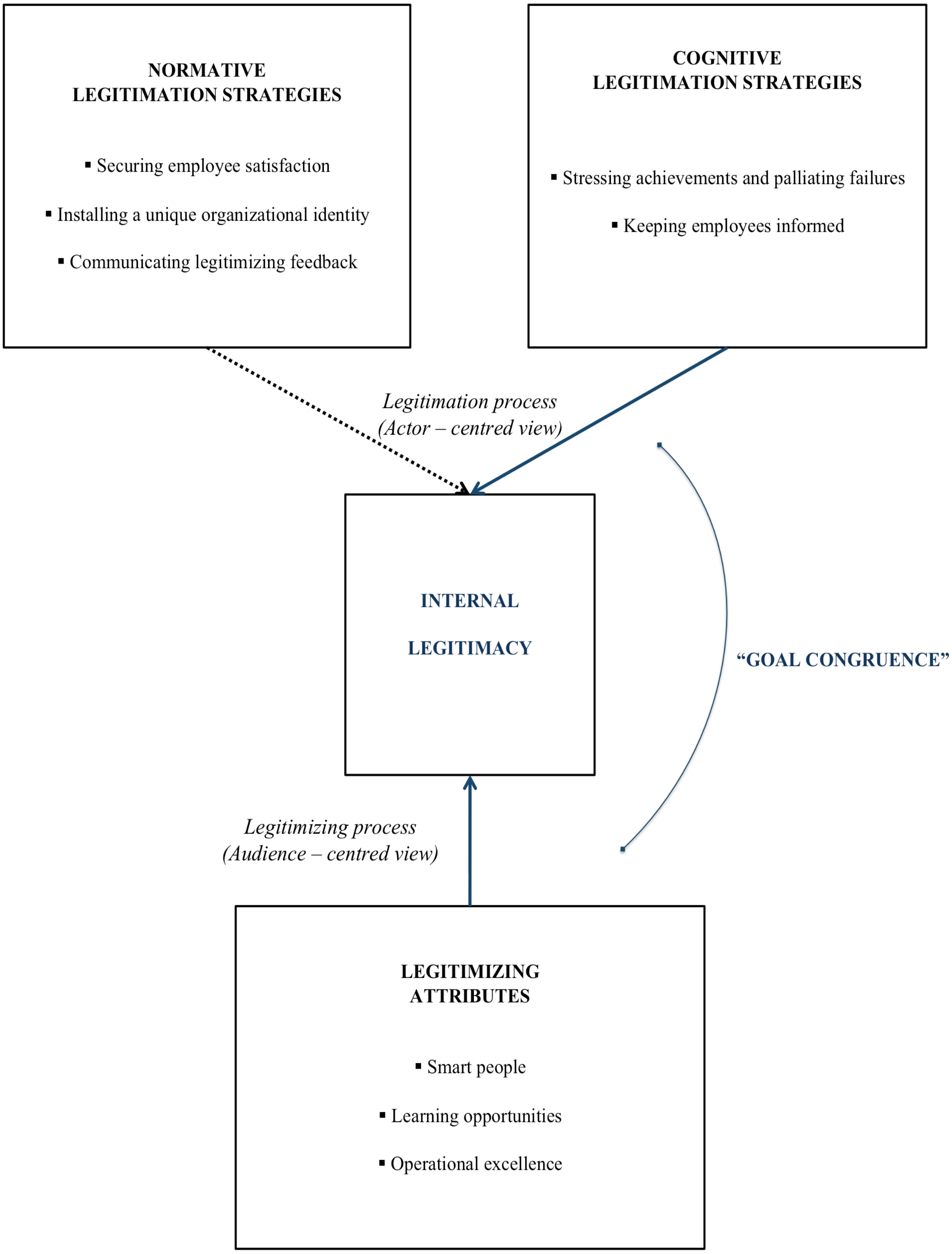
		- Employees have access to an internal blog, which is regularly updated with formal and informal information. - Employees can subscribe to biweekly "Lunch&Learns", which are workshops during lunchtime to learn about new company projects.
4. Installing a distinct organizational identity	*"We are unique"*	- Each employee has to attend a mandatory brand and culture workshop called "Who are we?", during which the brand manager explains and teaches the six core values of the firm. - There is a paper journal at the reception desk and a poster at several walls of the office, illustrating the core values of the company. - The founders use mysterious and playful language in internal communication to "inspire curiosity" of the employees, e.g. internal emails begin with "Congratulations, you've made your way down to the rabbit hole!". - Playful, atypical job descriptions are used, e.g. "le petit prince financière" - The company has a special team and budget to organize staff events such as thematic birthday and Christmas parties. - The management regularly uses winged language during internal communication: CEO during internal meeting: "If you are feeling envious, some of the highs of the high, the lows are also low btw, but the highs are pretty high, you can tell. So if you are feeling envious, sign up for some meet & greets. You too can experience the fun and thrill of this sort of intensity. Because it's really where it happens, and it's were the rubber hits the road."
5. Communicating legitimizing feedback	*"Others think we are great too"*	- Monthly updates about social media statistics (followers on Twitter, Instagram, Facebook, Facebook page likes etc.) are regularly announced. - Each press release of the company is displayed at "the wall of fame" - Quotes, feedback and the "net promotor scores" from guests and hosts are regularly included in the weekly newsletters. - CEO during all-staff meeting: "Where I do have numbers for is that we've been included in the 101 Thatler guide for 2004 travel solutions, Paris in fact is included rather than PERFECTSTAY globally, so congratulations Paris, we are all a bit envious. We are also been mentioned in Louis Vuitton NYC city guide, so clearly we are on our half to luxury status." - Thank you notes from guests are displayed at the wall: "Thank you so much for the absolutely top notch service you provided us the whole stay. We will highly recommend PERFECTSTAY and definitely use you again wherever we can." - Regular company-wide announcements of successful partnerships: "In December we also partnered with Uber for our competition to win a stay with us, congratulations to Naomi in NY, who is setting up that partnership. We tweeted about the partnership and there were 200 retweets on twitter, which was great."

Table 7: Legitimizing attributes

Legitimizing attributes	I grant legitimacy to PERFECTSTAY because…	Supporting quotes from interviews
1. Smart people	*"It only employs smart people"*	- "The people who run it are incredibly hands-on, they're around a lot and very keen to share their experiences with people. Most people here are just incredibly smart, and they who want it to work, it's very hard work but it's an interesting place to work." - "[The CTO] kind of epitomises why I joined PERFECTSTAY, the way that he acts and cares about every single person that is joining, and is meticulous about it. He is the reason why I kind of think this can be really good for me." - "I think what pulled me in was [the COO] and the fact that I had the impression there were a lot of Oxford/Cambridge/ MBA/Harvard - sort of very bright people here. So I thought, any company which has very, very bright people working for it must be pretty good." - "I should say an important part for me is that I know the founders are very good." - "I didn't know anything about the company before I was told about it, but now that I am in it I feel I can trust the leadership team, they seem to know what they're doing, they seem to have been here from the start pretty much, or given big commitments. So that's why I feel we have, it needs to have a good leadership team."
2. Learning opportunities	*"It is the ideal breeding ground"*	- "I connect very well with my direct manager and I frequently think, damn I want to learn from this guy." - "I always wanted to go somewhere where I could spread my wings a bit, because my view is very much to join a company where there is an opportunity to grow, learn and experience different things, so I am definitely keen not to be in a team for more than six months" - "I think the good thing is you can progress quite quickly. So I've been here for six months; I've gone from doing a couple of things to pretty much all things, get to know it…" - "So I think it's more of like a, as long as I'm growing, progressing and being challenged consistently, then I don't see any reason to leave just yet. And for the moment that pace keeps continuing." - "Progression here is really quick, and I'm quite career-minded, so that's really what pulled me in: the thought that in three years time I can be FD, and that the trajectory for your career is much higher." - "I'm very career orientated. I don't want to do something that's not going to progress. So everything I do has to be something that's going to get me a little bit further and, yes, this is great, it will lead me to a good career." - "Even if the company fails, it's been an incredible experience for me because I've learnt so much from it." - "So I knew, for example, that I really wanted to be in a company where there were active and incredibly smart co-founders or a founder, who I could learn a lot from, whether it was directly or indirectly by observing. So if it

		wasn't working closely with Founder1, 2 or 3, could I still learn from their actions, their vision or their goals? So that was one thing because I think ultimately, as you'll find with many people here at PERFECTSTAY, we all want to start our own business at some point. So a lot of this becomes the training ground for how we learn about how companies are built from the ground up."
3. Operational excellence	*"It has a high chance to hit big"*	- "I want to be part of a company that I believe is going to do well and, personally I think that if you are able to find a good position in a company that you think is going to succeed the potential for rewards are a lot higher." - "I'm not sure but I think it's a market leader. I think it is niche. I think it's got a first mover advantage in a market that is going to be doing well and if you believe in the sharing economy then this has a pretty good chance for succeeding and you know that it works because you've got Airbnb and this is capturing the top end." - "So we're backed by two VC funds and if you're backed by [VCFundX] it means that you have high potential." - "A company where absolutely everything you do has an immediate impact, where everyone is really, really motivated to work really hard; where you have the potential to have ideas listened to, that change very rapidly; I would say somewhere where you'd live or die by how hard you work." - "Look at how far we've come in such a short a time and where we aim to be going, and how crucial and how central the reservations team was at that period of time. And how much I could expand and grow within that team and the responsibility that it would entail."

Figure 4: Internal legitimacy building at PERFECTSTAY



Appendix 1: Interview protocol 1

1. How did it all start for you? How did you come in contact with Founder1/2/3? Did you buy the idea directly or did it require some persuasion? What convinced you?

2. What did you do before?

3. Could you tell me your history of PERFECTSTAY? What are remarkable activities for you in the evolution of the company? Which milestones/activities have had the highest impact on the company's evolution? How did your role evolve?

4. What do you particularly value in your work for PERFECTSTAY? What attracted you before joining? What attracts you now?

5. Why do you think other employees like working for PERFECTSTAY?

Job content
Working for a start-up
Atmosphere
Corporate culture
…

____

6. Would you describe PERFECTSTAY as a tech company, a software company, a logistics company or a service company or still something else? What do you think makes PERFECTSTAY different from other technology/service/logistics companies/start-ups? What are PERFECTSTAY' "black swan" characteristics compared to other typical high potential companies?

7. In which industry/market is PERFECTSTAY operating (hospitality market, hotel industry, lodging industry…)? Who do you see as the main competitors for PERFECTSTAY, or which players are important to take into account (as in: they define the setting in which PERFECTSTAY is operating without being direct competitors necessarily (f.e. Airbnb))

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8. What do you think are the biggest challenges/business risks for PERFECTSTAY at the moment? What is most important to achieve in the near future?

9. Focus of PERFECTSTAY is on creating value rather than capturing value, no strong focus on P&L.
- Do external stakeholder buy this? Is it difficult to convince them about the potential of the business model?
- Which KPIs are used to convince stakeholders?

10. Profitability in London is a very important milestone, do you have the feeling people care about this (or worry about this)?

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11. Is it difficult to find good people? Which efforts are made by the company to attract high-calibre employees? *Ask about incentive structure…*

12. Is there a high churn rate at the company compared to other start-ups? What do you think is the most important reason for people to leave PERFECTSTAY? Do you think it has an impact on the sustainability of the company?

13. What is the average duration to work for PERFECTSTAY?

____

14. Company is now evolving to its teenage years, it is moving away from the start-up phase, Top mgmt gets more and more detached, more middle management… Do you see this as a challenge PERFECTSTAY has to cope with and how do you think it will be able to do this?

15. Which kind of training sessions does PERFECTSTAY offer? Do you think it is important?

16. How does the company educate employees about the business model? Which activities? How are people "infected with the PERFECTSTAY virus"?

Appendix 2: Interview protocol 2

DEFINITION organizational identity:
" The set of beliefs shared by top managers and stakeholders about the central, enduring, and distinctive characteristics of an organization. What makes us, us let's say."

1. When did you join PERFECTSTAY?

2. What did you do before?

3. How did you find out about PERFECTSTAY? (Friends, press, coincidence…?)

4. Why did you choose for PERFECTSTAY?

5. In which department did you start? Did your role evolve already? How? Journey?

6. Was it difficult for you to get in? How long did the recruitment process take? Did that scare you/motivate you?

7. What do you particularly like/dislike in your job?

8. Could you tell me what you see as the most positive and most negative aspect about your job?

9. What is for you the biggest incentive to work for PERFECTSTAY?
- *Flexibility*
- *Working environment*
- *Team*
- *Responsibility*
- *Opportunities for competence development*
- *Career prospects (looks good on CV)*
- *Cooperation with bright people*
- …

10. Do you think PERFECTSTAY has a strong organizational identity?

11. Do you think PERFECTSTAY's organizational identity differs from other high-potential start-ups? What is similar and what is different?

12. Do you feel part of PERFECTSTAY, do you feel involved with the "quirkiness" concept?

13. Do you know how PERFECTSTAY is performing? Good/bad? Profitability?

14. Do you feel there is enough transparency about the company's:
- Strategy
- Future plans/growth perspective
- KPIs/performance
…

15. Do you care about PERFECTSTAY' performance metrics (*from a financial perspective → KPIs?)*

16. What do you see as your ideal length of time to stay at PERFECTSTAY?

17. Do you already have an idea about your plans for the future; would you like to stay as long as possible in your current role? Would you like to change roles? Change departements? Grow? Go to another company?

18. Finally, do you know the values that are part of PERFECTSTAY's organizational identity?
- No: Do you know how many there are?
- Yes: Can you numerate them?
- Which of them is most important to you?

STUDY 3

BUSINESS MODEL PIVOTING IN NEW VENTURES:

A RESOURCE PERSPECTIVE

4. BUSINESS MODEL PIVOTING IN NEW VENTURES: A RESOURCE PERSPECTIVE

Abstract

New ventures typically have to pivot their business model before arriving at a successful one that fits an uncertain environment. Despite the importance of business model pivoting to understanding how new ventures evolve into successful firms, literature on the factors enabling or hindering such pivots is surprisingly scant. We take a resource perspective to extend theoretical insights on the processes facilitating business model pivoting in new ventures. For this purpose, we conducted a longitudinal case study of a venture that went through two business model changes, only one being successful. We identify three resourcing frictions, inhibiting successful business model pivoting in a resource-constrained context: (1) lack of fungibility of newly acquired resources, (2) introduction of process management tools during resource accumulation and (3) lack of resource divestment. We conclude that certain resource structuring processes supporting initial business model pivoting can lead to rigidities hindering successful subsequent business model pivoting.

4.1. Introduction

We often identify firms with successful business models when they enjoy widespread success. We tend to forget, however, that early in life, these same companies had to pivot their business model several times before developing the business model they become successful with. Terracycle for example, one of the fastest growing social enterprises in the US, started by commercializing worm excrement before morphing into a company selling organic fertilizers to eventually launching its highly successful waste management program (Margery & Lepoutre, 2012). Likewise, Google ran through several business models before it discovered its major source of revenue, Adsense (Vise & Malseed, 2006).

We define a business model as the sum of three strategic decisions relating to (1) the market segment served, (2) the customer need addressed and (3) the resources and capabilities deployed to produce the firm's offerings (Abell, 1980; Fauchart & Gruber, 2011; Markides, 2013). By definition, business model pivoting then refers to a different market segment being served and/or a different customer need being addressed, supported by the same or different resources and capabilities to produce the firm's new offering.

To date, a complete and detailed understanding of how new, entrepreneurial ventures can successfully implement a change in market segment, customer need and supporting resources is lacking. This lack of understanding is of particular concern as new ventures are often resource-constrained (Ambos & Birkinshaw, 2010) and hence might encounter specific challenges in redeploying resources to support a change in market segment or customer need.

Extant literature provides some valuable insights, but to our opinion does not provide a complete answer to the question. In entrepreneurship research, entrepreneurial theories such as bricolage (Baker & Nelson, 2005) and effectuation (Sarasvathy, 2001) provide insights into how a new venture can use limited resources creatively. Although both literature streams focus on identifying and exploiting opportunities in a resource-constrained context, they do not specifically explain how the creative use of limited resources relates to business model changes. The resource management perspective offers another promising lens to enhance understanding of the resource mechanisms accompanying business model pivots, but in turn has limitations for new ventures in resource-constrained contexts. The resource management framework is informative as it explains how entrepreneurs can structure and manage their resource portfolio to obtain a competitive advantage (Sirmon, Gove, & Hitt, 2008; Sirmon, Hitt, & Ireland, 2007) and has recently made the explicit connection between resource structuring and business model development (Sirmon, Hitt, Ireland, & Gilbert, 2011). However, as the framework mainly focuses on the transformation of resources into capabilities in a context where resources are readily available, it does not apply to a new venture context where resources are scant. Since contemporary research has shown that resource management practices in a context of resource abundance are fundamentally different from those when resources are constrained (Sonenshein, 2014), existing resource management studies fall short in explaining business model pivots in entrepreneurial ventures.

In sum, although both the entrepreneurship and resource management literature provide preliminary insights in the relationship between business model pivoting and resource management, additional knowledge is required to have a complete understanding of this relationship within an entrepreneurial, resource-constrained context. Hence the research question addressed in this study: *How can resource-constrained ventures successfully pivot their business model early in their life?*

We conduct our research in an entrepreneurial IT venture, particularly salient to answer the research question. The venture under study tried to pivot its business model twice, early in its lifetime. It succeeded in the first pivot, but eventually failed to perform the second one. Hence, a comparison of the two pivots, with a focus on how the venture allocated and transformed its resources to support a new strategic direction in terms of market segment and customer need. We analyze data collected through participant observation, interviews and archival data using the extended case method approach (Burawoy, 1991, 1998; Danneels, 2002, 2007, 2011).

We identify three frictions in the resource management processes supporting initial business model pivoting (labeled "resourcing frictions") that hinder subsequent successful business model pivoting if not mitigated by managerial action: (1) the lack of fungibility of resources acquired to support the implementation of the initial business model, (2) rigidities introduced by process management tools to grow the initial business model, and (3) the lack of divesting accumulated resources supporting the initial business model. We show that each of these resourcing frictions require managerial action in order to overcome failure in subsequent business model pivoting.

We make two main contributions. First, we show that entrepreneurial bricolage, which is an important resource management process in resource-constrained ventures, is quickly overruled by the introduction of process management tools and the acquisition of specialized, less fungible resources to support a growth oriented business model. However, we also indicate that some form of bricolage might be preferred to the use of planned resource restructuring processes, to enable successful business model pivoting.

Second, we join the conversation about resource management in the context of entrepreneurial ventures, but move it beyond a focus on capability development. Instead, we focus on the resource structuring process, prior to capability development, that needs to be carefully managed before capabilities are formed. We highlight the importance of securing resource fungibility and extend the widespread argument that capability development leads to rigidities, by showing that unaddressed frictions during the resource structuring process can already lead to rigidities as well.

4.2. Literature review

The contemporary entrepreneurship literature emphasizes that ventures, early in their lifetime, need to be able to adjust to shifts in their environment (Bingham, Eisenhardt, & Furr, 2007), need to be able to engage in radical technology shifts (Furr, Cavarretta, & Garg, 2012) and also benefit from being able to compare different market segments and subsequently change from one segment to another in case the initial one seems inferior (Gruber, MacMillan, & Thompson, 2008). Despite this growing consensus about the need to have enough flexibility to pivot, the literature remains silent when it comes to explaining the resource implications stemming from this required flexibility. In what follows, we discuss two resource-related literature streams, which provide a useful basis for understanding the business model change – resource relation. Yet, to our opinion, both perspectives remain insufficiently developed in terms of purposeful business model pivots in a resource-constrained, entrepreneurial context.

First, as one of the emerging theoretical perspectives in entrepreneurship research (Fisher, 2012), the concept of entrepreneurial bricolage developed by Baker and Nelson (2005) provides valuable insights into the way new ventures act in a resource-constrained context. Since its original conception, bricolage, defined as “making do by applying combinations of resources at hand to new problems and opportunities” (Baker & Nelson, 2005: 33), has been applied in a range of different domains and to a variety of problems and opportunities. In the entrepreneurship literature, bricolage has been used to conceptually explain market creation (Baker, 2007), the creation of new technological trajectories

(Garud & Karnoe, 2003), and the development of new organizational forms (Perkmann & Spicer, 2014). Bricolage is further recognized to serve satisfying ad hoc demands of existing customers (Baker & Nelson, 2005), and to create utilitarian, pre-planned or improvisational solutions in the start-up phase of a venture to complement its purposeful resource seeking activities (Baker, 2007). Hence, so far, bricolage has often explained how a resource-constrained venture is able to achieve different goals through the creative use of resources, but has not to this point explained how that venture is able to achieve the goal of business model changes over time. Although it hints at the creative use of resources, by making do with what is at hand, to support business model changes in the earliest stage of a new venture's life, it also suggests that entrepreneurs vary in their enactment of bricolage, and that this variation affects firm outcomes over time (Baker & Nelson, 2005). Hence, bricolage might be a way for new ventures to support business model pivots in a resource-constrained context, but requires further detailed empirical investigation to explain *when* and *how* they can successfully do so.

Second, the resource management framework, developed by Sirmon, Hitt and Ireland (2007) provides another potentially useful knowledge base, informative to the link between business model pivots and supporting resources. The resource management framework is developed as an extension to the resource-based view (Penrose, 1959) and argues that entrepreneurs have to *manage* their resource portfolio to obtain a competitive advantage (Sirmon, Gove, & Hitt, 2008; Sirmon, Hitt, & Ireland, 2007). It makes an explicit link between a venture's business model and its resources by suggesting that the venture engages in a process of resource structuring, consisting of "acquiring", "accumulating" and "divesting" resources, to support business model development. Under conditions of environmental uncertainty, it further suggests that firms should try to acquire a portfolio of resources that allow for a great variety of opportunities to be pursued, i.e. acquire resources as "real options". It however does not explicitly take into account that new ventures are resource-constrained and therefore cannot easily build such a portfolio of resources. Moreover, scholars building on the resource management framework mainly focus on the resource management processes succeeding the resource structuring phase. They explore the conditions under which management has the highest impact (Sirmon et al., 2008; Holcomb, Holmes Jr, & Connelly, 2009) and show that not only top management but also middle management plays a role (Chadwick, Super, & Kwon, 2014). With regards to contingencies, they show that resource characteristics such as deployment flexibility, uniqueness and differentiation determine the role management plays in bundling resources into capabilities. Managers make a difference when companies compete with similar resources and when these resources can be used for different activities (Sirmon et al., 2008). While focusing on the bundling and leveraging phase, they suggest that management only impacts the structuring phase in the long term (Sirmon et al., 2008).

Taking these two perspectives into account, we argue that it is likely that new, resource-constrained ventures will deploy a mixture of bricolage and resource management activities to support business model pivots. Whereas bricolage reflects a kind of meandering that might result in a particular goal, resource management implies the actively planned and structured management of the venture's resource portfolio. Yet, both perspectives are insufficiently developed to offer a complete picture of the role that resources play in realizing business model pivots early in the new venture's life, when resources are scant and still need to be structured to support the business model. By conducting a detailed case study of a resource-constrained venture, which tried to implement two business model pivots early in its lifetime, we aim to complement the entrepreneurship literature, and by doing so extend the resource management framework in a resource-constrained context.

4.3. Method

We conducted a comprehensive, longitudinal case study of Mobit (a pseudonym), a resource-constrained venture operating in the emerging mobile Internet industry, with the aim to reveal unexplored dynamics between business model pivots and resources. Our analysis followed the principles of the extended case method (Burawoy, 1991). The extended case method uses empirical case data to re-conceptualize and extend existing theory (Danneels, 2002, 2007). The approach reflects an a-priori theoretical framing in which research activities aim to modify, exemplify, and develop existing theories (Tavory & Timmermans, 2009). Since we argue that existing theories are informative but fall short in providing a comprehensive explanation of the role of resources during business model pivoting in a resource-constrained context, our research question can be seen as addressing an anomaly, which requires a modification of existing theory. As such we consider the extended case method as the appropriate methodological approach to answer our research question. We used a combination of real-time and retrospective data to engage in several iterations of reviewing literature, collecting data and analyzing data.

Mobit represents an instructive case of business model pivoting in a resource-constrained context, as it tried to pivot its business model twice over the course of its lifetime, with limited access to resources. The business model pivots involved fundamental shifts in the company's addressed market segment and customer need and required significant changes in the resources deployed to support the new business model (Abell, 1980; Fauchart & Gruber, 2011). Since the first pivot was successful while the second was not, Mobit is particularly informative because the dynamics between business model pivots and resources could be observed twice and contrasted with each other.

4.3.1. The story of Mobit

Mobit was the first Belgian company to enter the mobile Internet industry in 2007. During Spring 2007, a software engineering professor (a subsequent founder of Mobit) had the idea of developing a technology, which could automatically transcode desktop-content to a mobile website available on any mobile device. He developed a prototype version with help from his students and attracted three software engineers with the aim of developing a software platform to mobilize existing websites in real time for any mobile phone and browser. In July 2007, a first pilot project was successfully launched and paid for by a lead user-customer. This led to the official founding of Mobit in December 2007. Mobit positioned itself as a mobile website developer, offering a customized and comprehensive mobile website to anyone requiring a mobile version of its desktop website. Revenues were gained by selling full-developed mobile websites to early adopters of mobile technology (see table 8 "business model 1").

However, in 2007, the mobile Internet industry was still in an early stage of development. Despite high growth expectations (the number of mobile subscribers amounted to 2.1 billion at the end of 2005 and was expected to double before 2011) the market experienced huge ambiguity regarding product definitions and industry structure. Although 3G and 4G networks offered mobile data speeds comparable to ADSL and by 2010 most handsets would support Internet access, the market struggled to gain momentum due to a lack of mobile content, bad user experience and expensive tariff plans. Mobit experienced difficulties realizing sufficient sales since many of its customers preferred working with established website developers instead of a newcomer. Around mid-2008, the company decided to pivot its business model. Instead of developing mobile websites for end customers, the company shifted to developing a proprietary technology platform, which it licensed to web agencies as partners of the company (see table 8 "business model 2"). The technology platform (called the 'Composer') enabled the web agencies to develop mobile websites for existing customers with a decreased development time of 50-80%. The changed business model was incorporated into a business plan and successfully attracted venture capital investment in order to develop the technology platform. From the beginning of 2009 onwards, the technology platform was licensed to the six leading web agencies in Belgium and the Netherlands and one, medium-sized web agency in the UK.

However, around mid-2009, sales of the Composer started to decrease and further developments in the immature mobile Internet industry triggered a further revision of the business model. End users started to favor apps, downloaded directly from a platform such as App Store, Nokia Ovi and Android Market over server based mobile websites. To compete with the increasingly popular web apps, Mobit decided to pivot its business model again and target smaller, low-end web agencies, which use open source CMS to develop websites. Instead of licensing a sophisticated technology platform to high-end web agencies, Mobit now wanted to offer a simple and user-friendly mobile website development tool (called 'the Mobilizer') to lower-end web agencies, supported by a freemium revenue model (see table 8 "business model 3"). By September 2009, an initial version of the Mobilizer was ready and a free version was officially launched in December 2009. The free version was quickly adopted in the market but the paying version wasn't successful. A lack of financial resources resulted in company closure in May 2010. See figure 5 for a timeline of Mobit's key activities.

Insert table 8 about here

Insert figure 5 about here

4.3.2. Data collection

The focal period of interest runs from mid-2007 (implementation of business model 1) to mid-2010 (company closure), and data gathering spanned this entire period. We collected data using four techniques: (1) participant observation from the beginning of 2008 until mid-2010, (2) semi-structured interviews conducted during Spring 2011, (3) internal records such as meeting minutes, presentations, financial plans etc. and (4) publicly available archival data. We relied on participant observation as the main data source, with interviews, private and public documentation as important triangulation sources (Huberman & Miles, 1983; Jick, 1979).

4.3.2.1. Participant observation

The first author joined Mobit as a participant observer at the end of 2007. He started by attending formal and informal company meetings, as a researcher and advisor, on a weekly basis for a period of 3 months. When the company wanted to develop a formal business plan for business model 2 to attract external funding around mid-2008, he agreed to help develop the financial plan and support the investment seeking process. From that moment on, he spent on average 1 day per week in the company as a financial advisor and was given access to several rich data sources. First, he was allowed to attend the weekly management meeting led by the Founder-CEO. Second, after completing the successful venture capital series A round in November 2008, a formal board of directors (BoD) was appointed and the first author participated in the monthly board meetings. Finally, in January 2009, Mobit recruited a COO who decided to introduce a bi-weekly communication forum to the employees, which the first author could also attend. Altogether, he attended 108 meetings, accounting for approximately 275 hours of observation. Each meeting was recorded in meeting minutes and complemented with private field notes. The meeting minutes and written field notes provided a key resource to employ an insider-outsider approach. That is, the two co-authors (a senior researcher and a PhD student) were involved in the coding and analysis of the meeting minutes and field notes, so that credibility of the findings would not rely solely on the interpretations of the participant observer (Gioia, Price, Hamilton, & Thomas, 2010).

4.3.2.2. Interviews

The participant observer conducted three interviews at the end of the observation period to validate preliminary results: one with the CEO, one with the COO and one with the senior account manager. After the participant observation period and closure of the firm, the PhD-student co-author conducted a series of follow-up interviews during Spring 2011, with the former founder-CEO and 5 former employees willing to reflect on their time at Mobit. Follow-up interviews adopted a semi-structured format, specifically designed to complement the participant observation insights and validate preliminary results. Guiding questions gauged, among others, former employees' reflections about changes in tasks, responsibilities, role descriptions and management during their employment at the company. In total, 13 follow-up interviews were conducted, lasting between 30 minutes and 1.5 hours and resulting in 290 pages of double spaced interview transcripts.

4.3.2.3. Internal records

During Mobit's existence we had access to private archives, covering nearly every important document circulated in the company. These documents included official reports of every team meeting (14 reports, 24 pages) and management meeting (71 documents, 240 pages), preparatory reports and PowerPoint presentations for Board meetings (15 in total, 78 pages of reports and 174 presentation slides), and all documents stored on the intranet server. The founders used the file-sharing system "Dropbox" to exchange internal documents among themselves and with employees. These included resource-scheduling documents (called SPRINTS cfr. infra), financial planning documents prepared for board meetings and, technology roadmaps outlining the prioritization of future technological additions. The resource-scheduling documents included a detailed description of the tasks of each operational employee for the following weeks, over a three-month period, revealing operational and resourcing priorities and changes in those priorities. Financial planning data included detailed forecasts and comparisons of actual versus planned milestones, thereby informing us about the proceeds and how they changed. Finally, the initial technology roadmap alongside the frequent updates of the roadmap over time enabled us to learn about the current and future technological choices the company wanted to make.

4.3.2.4. Publicly available archival data

Lastly, we collected exhaustive publicly available data on the company. These included all press releases and articles found about Mobit on the web and in the Factiva database as well as the presentations and elevator pitches used by the company at mobile Internet conferences. In total we analyzed 53 minutes of PR video material and 15 pages of written press coverage. An overview of all the data used in this case study can be found in table 9.

Insert table 9 about here

4.3.3. Data analysis

As noted above, we used the extended case method as a guide to analyze the data (Burawoy, 1991). The extended case method "begins with a favorite theory, but does not seek confirmations but refutations that inspire to deepen that theory" (Burawoy, 1998:16) and goes through many cycles of confrontation between data and theory (Danneels, 2011). We started from the premise that resource management practices impact how new ventures can successfully implement business model pivots and particularly so in a resource-constrained context. We therefore began with the resource management framework developed by Sirmon et al. (2007) as our "favourite theory" to further deepen and extend our understanding.

In a first "running exchange" (i.e. confrontation between data and theory (Burawoy, 1991), we confronted the three resource management activities identified in the resource management framework (i.e. resource structuring, bundling and leveraging) (Sirmon et al., 2007) with the data at hand. This led us to conclude that Mobit primarily engaged in resource structuring activities during its entire lifespan. This is not surprising since Mobit is a new venture, observed at an early stage of development. Being small and young, it did not arrive at the resource bundling and leveraging phase, primarily prevalent in later stages of development in more mature, established firms. As a consequence we confined our analysis to a focus on the three sub-processes of resource structuring (acquiring, accumulating and divesting) only.

The second running exchange calls for continuously moving back and forth between data collection and analysis (Burawoy, 1991). As our initial data analysis, itself informed by the first exchange, suggested fundamental differences in the resource structuring activities between the two transitions, we divided the focal period of interest into two distinct phases, each covering a transition process. This led to the collection of additional information about the transition micro-processes in both phases, followed by a structured comparative analysis of the two phases regarding differences in resource structuring activities and transition micro-processes. In particular, we developed a dual timeline for each transition, covering all relevant managerial activities related to the business model change on one hand and to changes in the resource configuration on the other. We merged both timelines to visually and interpretively find overlaps and draw conclusions about relations between both managerial activities. We then structurally compared the business model change–resource structuring relation between both transitions using a contrast table (Miles & Huberman, 1994) for four distinct resource categories (human, financial, technological and social resources, see table 10). Since this table revealed different discriminators for each resource category, we first developed insights for each resource category separately and subsequently drew conclusions about the resource portfolio as a whole. We present our findings in the next section following the same logic.

Insert table 10 about here

4.4. Findings

Our data reveal several insights derived from the differences observed between the two transitions of Mobit. More specifically, we find that certain frictions in the resource structuring process during the first transition resulted in resource rigidities, which ultimately became the main reason for failure during the second transition. In what follows, we begin by explaining our insights about the resource structuring process during the two transitions. We then identify and describe three "resourcing frictions", *i.e. frictions in the resource structuring process that result in rigidities and management challenges hindering successful (subsequent) business model pivoting over time.* Consistent with accepted practice, we use illustrative examples in the text and complement them with additional quotes in table 11 to support our interpretations (Pratt, 2009; Sonenshein, 2014).

Insert table 11 about here

4.4.1. Transition 1: Acquisition and accumulation of specialized resources

Transition 1 from business model 1 to business model 2 involves the acquisition and accumulation of specialized resources. In terms of *financial* resources, a substantial amount of funds was acquired to support the implementation of business model 2 and financial planning and control systems were installed to monitor the allocation of financial resources. In August 2008, innovation grants from both the European Commission and local authorities were attracted to develop the technology platform. Subsequently, in November 2008, VC investment was raised from a consortium of three VC funds and a convertible loan was secured from the research organization from which the venture spun-off, in order to implement the new business model 2. To manage these newly acquired financial resources, a board of directors was appointed and a proper financial planning system was developed to report to the board on a monthly basis. The lead VC introduced this at the term sheet closure meeting in October 2008:

> *"… Don't worry about the financial reporting. We have our own reporting system and will implement it. VC1 will spend one to two days per week at Mobit to set up the financial reporting system, manage the accounting work and prepare with you guys the financial report for the board, which we expect to meet once a month. Doing so, you don't have to worry too much about developing financial processes and you can focus on the real work"*

A few months later, the syndicate partners of the lead VC applauded the use of the financial reporting system at the first board meeting in March 2009:

> *"The financial reporting system aids in supporting a standardized reporting at the board meetings. Actual and budgeted proceeds can be compared on a regular basis. In this way, we can monitor closely how the money is spent."*

With regard to *human* resources, transition 1 involved the recruitment of a significant amount of specialized human capital and the introduction of HR process tools to manage the new staff. Among the most important positions, the founders recruited a COO, two senior account managers and a senior engineer based on specialized task experience. The COO had more than 10 years' experience as a VP engineering and operations. The newly hired account managers had more than 5 years' experience in managing the accounts of a web design agency and the senior engineer had more than 10 years' experience in managing an engineering project. The founders and the investors believed that bringing in experience was required to implement the transition to business model 2. For instance, the CEO declared at the board meeting in May 2009:

> *"…Account manager 2 is the ideal recruit for our second vacant account manager position. She has been an account manager before and is well connected in the web design community in Belgium and the Netherlands. Recruiting her is getting access to her business cards."*

Further, the management team introduced a HR management and control system. The system was used to break down daily staff activities into a number of tasks (SPRINTS). Each SPRINT had a minimum duration of 3 hours and a maximum duration of 24 hours. The SPRINTS were used for monitoring, reporting and prioritization and to analyze whether employees needed training in a specific task. Additionally, they were an essential input to the board meetings, during which the SPRINTS were used to report the primary tasks for each month, and illustrate which tasks had been undertaken to accomplish associated goals. The COO updated the SPRINTs on a weekly basis and presented aggregated forms to the board to be approved for a monthly forecast. The approved SPRINTS were printed on A3 format and put on the walls of the open offices for everyone to be aware of his/her colleague's tasks. During the first board meeting in March 2009, the COO explained the following to the investment committee:

> *"…I use a SPRINT system to manage the engineering tasks. Each task, which takes longer than 3 hours, should be reported. No task in the SPRINT can take longer than 24 hours. It allows me to allocate resources to tasks and it allows you, at the board, to know what the priorities are, what eventual changes in priorities mean in terms of people and required skills and it provides a good view on the engineering roadmap of the next 3 to 6 months."*

In terms of *technological* resources, transition 1 implied that the majority of open source technology components used in business model 1 were replaced by in-house developed proprietary software components. Few technological elements were licensed in. Management focused on the in-house development of a proprietary technology platform with a professional architecture, a well-elaborated documentation, and up-to-date technologies such as a device detection system, cloud presence, geo-location, etc. The CEO reported at the board meeting in April 2009:

> *"…We will replace the open source elements such as the WUFFL database with our own proprietary components. We cannot rely on open source and charge our customers an annual license fee. First, the open source stuff is not always reliable and second, it is covered by the licensing policy of the Free Software Company. Although they have a dual purpose license, which enables to charge for these components, it does not guarantee optimal service nor does it allow us to close SLAs with them, which protect us if any of the SLAs with our clients is infringed."*

Since business model 2 was targeted at licensing the technology platform to high-end web designers, moving from open source to proprietary and well-documented components was necessary, as these web designers preferred the best tools available. They expected on-line help and a better service than the usually 'noisy' open source modules they could access themselves. The management team therefore allocated its most technically skilled employees (about two-thirds) to focus on the development of the proprietary platform.

Finally, regarding *social* resources, transition 1 was associated with alliance formalization. Whereas business model 1 allowed management to make use of its personal network for recruitment, contacting clients, etc., during transition 1 a number of formal alliances with different partners were closed. For instance, the venture started to use a headhunting agency to recruit senior staff. The CEO reported at the board meeting, May 2009:

> *"…We now want to make use of Headspring, a head-hunter in the area, specializing in tech start-ups. It's too difficult to find experienced people on our own. And, since we've had some bad experiences in the past we think that professional help at this stage of the company development might be more appropriate. If you agree on the contract, they will start next week to recruit two senior account managers and two senior engineers…"*

The account managers approached new web development agencies with which they had no previous relationship. As a core element of business model 2, alliances with new web development agencies were formed by the account managers, which involved commitment from the web agency to exclusively cooperate with Mobit, and came along with different services, such as 24-hour hosting support and co-sales, outlined in service level agreements (SLAs).

We conclude from the above that the newly acquired resources to support transition 1 tend to be 'specialized'; i.e. imprinted with significant prior experience (human), accompanied by milestones (financial), developed in-house (technological) or contractually embedded (social). In addition, process management tools are introduced during transition 1, to efficiently manage and accumulate these resources, which further reinforce the specialized nature of the resources involved. The specific nature of the newly acquired resources, together with the management tools makes the new resource base less fungible compared to the company's original resource base. Fungibility refers to the capacity of resources to be deployed for different purposes and in different ways (Prahalad & Hamel, 1990). Since experience tends to create a knowledge corridor confining the employability of human resources to the boundaries of their field of experience (Gruber, MacMillan, & Thompson, 2013), milestones attached to financial resources limit their use for purposes not related to the milestones, fixed contracts come with agreements that need to be respected and proprietary components are difficult to replace, the newly acquired resources cannot easily be used in different ways and deployed for another purpose than business model 2.

4.4.2. Transition 2: (Failed) reorientation of specialized resources

Whereas transition 1 involved the acquisition of a significant amount of specialized resources and a focus on the accumulation of resources through the introduction of process management tools, transition 2 involved no or a lesser amount of newly acquired resources, and a primary focus on the (attempted) reorientation of the resources acquired and accumulated during transition 1. Regarding *human* resources, Mobit tried to reorient employees towards new roles and tasks required to execute business model 3. However, this was quite difficult as the experience of the newly hired employees during transition 1, hindered a flawless reorientation of roles and tasks during transition 2. The following quote from the CEO during a follow-up interview in September 2010 illustrates the difficulty in convincing employees to change direction:

> *"Even in February-March, when we were doing the road show for the Mobilizer (technology of business model 3), I don't think our COO understood we no longer wanted to focus on building an extensive technology platform. He, however, still wanted to develop lines of code and new features. He was used to managing technology platforms of over 100 000 lines of code at his previous company. He didn't want to accept that we could scale that down to a few 1000 lines and had to invest in the user interface instead… "*

Furthermore, the HR management system installed during the first transition (SPRINTs) also hindered reorientation of human resources, as illustrated by the following quote from account manager 1, nominated to take the lead in developing the backbone product of business model 3 (i.e. the Mobilizer), during his follow-up interview in December 2011:

> *"I was lucky I could count on one of the software engineers in New York to discuss the engineering part of the Mobilizer and code an initial prototype. The engineers in Belgium all had this crazy SPRINT system. If I wanted them for more than a few hours, they had to ask permission, plan it a week or even a month ahead and look at the priorities. I had to fight to make the Mobilizer a priority. The CEO said yes, but the COO always had fifty other tasks to do first, for very good reasons of course, but still... The New-York based software engineer could escape from that, as he wasn't physically present in Belgium. He could free up his mind… "*

Regarding *financial* resources, the reorientation of the VC money and convertible loan seemed to be challenging as well. The different installments of the VC investment were attached to pre-set milestones and the convertible loan included clear criteria for conversion. The VCs on board inhibited the founders from looking for additional capital to finance transition 2. The only way to move forward was to convince investors to reallocate part of the investment money or to be able to use the new instalments for the revised business model. However changing the milestones imposed in the venture capital agreement was difficult, as illustrated by the following conversation between the CEO and the lead investment manager during the board meeting in January 2010:

> *"CEO: we can keep the company going till end of May, beginning of June, but then we need the next slice of 750k. It is clear that we will need to change the milestones as we are shifting to the Mobilizer.*
> *Lead investment manager: a change in milestones will need to be explained to our investment committee…*
> *CEO: You mean that we are not sure to get the mone? In that case we will need to file for liquidation before end of April so we can pay out social fees…*
> *Lead investment manager: I think that the investment managers will follow our advice, but I recommend you and the new product manager to prepare a presentation. Some general partners might have questions why a change is needed after only one year of operations…"*

The third category of financial resources available to Mobit, innovation grants, is usually seen as an uncomplicated, inexpensive form of capital. However, as innovation grants were specifically attracted to develop the proprietary technology platform underlying business model 2, they included a three to six month progress-reporting requirement, tied to new pieces of technology agreed upon at the time of grant application. It was therefore also difficult to reallocate the grant money to something else. During the last board meeting in May 2010 the CEO explained:

> *"… The innovation granting institute wants us to finish the development of the device detection components or they refuse to pay out the last slice of*

money. They don't care that we decided to liquidate the company and that the people working on it might have left by the time it is finished. They just want to check the boxes to cover themselves…so we need to finish this to avoid being filed for bankruptcy…"

The same holds true with respect to the reorientation of the *technological* resources. As the technology platform was the 'heart' of the company, management did not consider developing new technology but rather tried to redesign the existing platform to serve the needs of the new target segment. At the board meeting in July 2009, the product manager presented the Mobilizer as follows, illustrating a focus on platform extension, rather than development of new technology:

> *"I presented our technology partners to our partners in London to start discussing which customers they had that would prefer our solution over the more fancy apps. They alerted me that the bottom end of the pyramid would be a better choice than the deep pockets they worked for. I found a company in Canada with a similar technology platform to ours, a cool GUI, web based technology, everything we need. Their technology platform is not very stable though, ours is technically miles ahead. Their users are the ones we need to target … "*

Finally, no exception was found regarding *social* resources. Transition 2 implied the targeting of a customer segment, different from the customer segment agreed upon in the fixed contracts with the commercial partners. As a result, the company struggled to reorient its social resources. Even though the targets were not reached, the commercial partners expected the company to further develop the technology and assist in sales talks. As it was important to ensure credibility as a technology company with respect to its professional and commercial network, Mobit did not consider violating the contracts it had made with those partners. The COO explained this during the board meeting in February 2010:

> *"We cannot just reallocate our account manager to a different customer, we need to live up to the promises we made to Partner 1. We promised we would join them in meetings with their potential clients. So that is what our account managers should prioritize. If not, we will be in trouble and damage our image as a young technology company. A contract is a contract and SLAs are SLAs…"*

4.4.3. Frictions in resource structuring inhibiting business model pivoting in a resource-constrained context

In the previous paragraphs, we described the resource structuring processes associated with the two transitions. Drawing upon these insights we conclude that, while the newly acquired resources and the managerial processes guiding the accumulation of resources during the first transition successfully supported the change from business model 1 to business model 2, these resource structuring processes, at the same time, introduced rigidities hindering transition from business model 2 to business model 3. We argue that the resource structuring process supporting the first transition involves certain "frictions", which result in rigidities inhibiting a successful second transition. We refer to them as "resourcing frictions" as they concern characteristics of a resource structuring process that ultimately resulted in a failed business model change. A particular friction was identified in each of the three resource structuring sub processes (acquiring, accumulating and divesting). We elaborate on each resourcing friction below.

4.4.3.1. Friction 1: The lack of fungibility of newly acquired resources

During transition 1, resources are acquired that are less fungible than the initial resources the company had before transition 1. This results in a less or non-fungible resource portfolio after transition 1, implying that the resources cannot easily be used for purposes other than the ones they are initially acquired for. Whereas during transition 1, the original fungible resource base could smoothly be reallocated towards the new business model, this no longer was the case during transition 2 because of decreased fungibility of the newly acquired resources. Mobit's management underestimated this lack of fungibility. For instance, they made the (wrong) assumption that the VCs would recognize the need for change, agree to change the milestones and give permission to use the financial resources to implement the new business model. They tried to convince the investment managers on the board and, later on, the investment committees of their VCs in a time consuming road show. However, during that period, they had to continue respecting the milestones installed by the VCs and the grant-giving institute and allocating the financial resources according to the milestones in the business plan. This ultimately resulted in a burnout of cash on business model 2 and a lack of sufficient financial support to develop and especially commercialize business model 3. Likewise, Mobit's management underestimated the less fungible nature of the employees recruited to deploy business model 2. People who identify themselves with a certain job /task are typically resistant to changes that imply fewer resources available for the certain job/task (Feldman, 2000). Although Mobit's management assumed they would be flexible enough to reorient themselves towards a new role, the newly recruited people were resistant to reorientation. They were experienced employees, who had developed a career in a certain job/task and wanted to continue improving themselves in that area. Account manager 1 had built a career as a manager of technological resources and had previous experience in building a technology platform. He did not question the validity of the platform, wanted to continue executing the job he was recruited for and did not want to change to another role. Similarly, account manager 2 was resistant to the management team's suggestion to change her role from an account manager to a digital marketer, as she was an experienced account manager and had no previous experience in digital marketing. Finally, Mobit's management experienced difficulties with the less fungible nature of the investment managers, brought on board during the first transition, as well. The investment managers' previous experience with an MSP model (business model 2) had been a primary driver to invest in the company, which made them reluctant to convert to a SaaS model (business model 3).

4.4.3.2. Friction 2: The use of process management tools to support resource accumulation

During transition 1 a number of process management tools are introduced to support the change to business model 2. The process management tools involve a financial planning and control system, a HR task management system (SPRINTS) and a technology roadmap and are focused on the accumulation of resources in order to implement business model 2. However, their introduction turns out to be a barrier for transition 2. Although the financial planning created transparency to implement business model 2 and allowed comparison between actual and budgeted spending, at the same time, it made it more difficult to use funds for non-agreed upon purposes. Task planning clarified how much time tasks took, what everybody was doing and what was needed to prioritize, but made it more difficult to implement new tasks or change old tasks. The technology roadmap enabled agreement on milestones with VCs and with partners, but introduced rigidities when milestones needed to change or when the roadmap needed to be revised. Mobit's management again underestimated the loss of flexibility caused by the use of these process management tools. Previous to the first transition, Mobit operated in an entrepreneurial mode (Zahra, Sapienza, & Davidsson, 2006), where few or no process management tools were used. During transition 1, the efficient accumulation of resources endorsed the introduction of such process tools. However, after transition 1, these process tools carried along rigidities towards new changes. As Mobit's management continued to use the process management tools supporting the first change, it experienced difficulties in moving away from the new business model, which ultimately resulted in the failure of the second business model change.

4.4.3.3. Friction 3: The lack of resource divestment

During both transition 1 and 2, no resources are divested, with the exception of the open source technology components during transition 1, which appears to be a barrier for successful business model pivoting over time. The technology platform developed in transition 1 was not considered for divestment in transition 2. It was taken for granted that any change should start from the proprietary technology platform. The transcoding solution was proprietary to Mobit and considered to be 'core' to the company. While it was clear that the market need identified in business model 2 had changed towards favouring apps over mobile websites, Mobit did not consider a new technical solution to address the new market need. Instead, it searched for a new market segment it could address with the technology at hand. While this might have been a defendable choice at that time, the market evolution later proved the inferiority of this solution. With regards to human resources, Mobit's management did not dismiss employees that did not fit into the second business model either. This resulted in a sustained burn rate, which made it difficult for the venture to survive. Although layoffs of human capital seems to be an inevitable process for a company to change, at Mobit, no staff was laid off during the first transition and only four people left during the second transition (of which one was actually dismissed). Mobit's management believed it could retrain and reorient its current personnel, as firing employees could signal bad functioning to the new market. Finally, Mobit did not divest its financial partners either. Instead it tried to convince its existing investors to invest in the new business model. As the company had a good relationship with the lead investors prior to the second transition, management believed that they could reorient them in favour of the new business model during transition 2 as well.

4.5. Conclusion and contribution

Through an in-depth analysis of two business model pivots (one successful, one unsuccessful), experienced by an entrepreneurial venture, we elaborate existing theory about the relation between business model pivoting and resource management. We started with the premise that extant theory falls short in explaining how resource-constrained ventures can pivot their business model, taking into account that entrepreneurship theory didn't yet focus on resource management in the context of change, while the resource management framework typically assumes the availability of slack resources. We show that resourcing frictions, including the acquisition and accumulation of less or non-fungible resources, the implementation of rigid process management tools to accumulate resources and a lack of resource divestment, introduce rigidities, which have to be mitigated by management in the absence of slack resources. Overall, these insights add to the so far limited understanding of how new ventures may evolve into successful firms, and open-up avenues for research into how ventures can address the challenges to growth in resource-constrained context.

4.5.1. Contributions to the entrepreneurship literature

The theory of entrepreneurial bricolage is one of the most influential theories regarding resources and changes by resource-constrained firms (Baker & Nelson, 2005; Fisher, 2012). The core argument of this theory is that resource-constrained firms tend to use the resources at hand to achieve goals and solve problems by meandering into a new direction using their existing resources. Given the resource-constrained context of Mobit and the 'problem' of business model pivoting it is facing, one might consider entrepreneurial bricolage as a particularly useful strategy to be used in this case.

Nevertheless, our data shows that only limited processes of bricolage were used during both transitions. Some processes of bricolage could be observed in both transition 1 and 2, for instance, the use of network bricolage in both transitions to recruit people, financial bricolage during transitions 1 and 2 to develop the prototype and human resource bricolage in transition 2 when account manager 1 became the product champion for the new product. However, our findings further suggest that planned resource structuring processes quickly predominated improvisational bricolage processes. As a growth-oriented company Mobit seemed to prefer processes of resource acquisition and accumulation to support business model pivoting. This is not entirely surprising as Baker and Nelson (2005) indicate that too much focus on bricolage might lead to 'stalled growth' and a loss of opportunities and suggest that growing companies use limited forms of bricolage on a temporary basis. We extend this view by arguing that resource-constrained ventures with a strong growth ambition use entrepreneurial bricolage as a secondary process, merely complementing paramount resource structuring processes, to support business model changes. However, we further conclude that a lack of bricolage might be a reason of failure to make a subsequent transition. The choice of using resource structuring activities instead of bricolage to support a business model pivot heavily reduced Mobit's flexibility and contributed to the failure of the second transition. We conclude that even for a growth-oriented venture bricolage might be a valuable strategy to support business model pivots over time. Although bricolage activities can lock the venture into a self-reinforcing cycle of activities that limit growth (Fisher, 2012), it might be the only way for growth-oriented entrepreneurial firms to persist in a resource-constrained and changing environment.

4.5.2. Contributions to the resource management literature

The resource management perspective provides a theoretical framework that explains how managers structure a firm's resource portfolio, bundle the resources to build capabilities and leverage those capabilities to create and maintain value (Morrow, Sirmon, Hitt, & Holcomb, 2007; Sirmon et al., 2007; Sirmon et al., 2011). Although this framework does not explicitly refer to change, it is clear that business model pivots will be accompanied by intensive restructuring of the resource portfolio, through acquiring, accumulating and divesting of existing and new resources, early in a new venture's life. We extend the resource management framework in several ways.

First, we highlight the important role of *resource fungibility* in the resource restructuring process supporting business model pivoting. The concept of fungibility is central to the resource-based view. Penrose (1959: page 25) states that "the services yielded by resources are a function of the way in which they are used - exactly the same resource when used for different purposes or in different ways and in combination with different types or amounts of other resources provides a different service or set of services". Although resource fungibility is often referred to as a resource characteristic, more recent studies go beyond this static view and suggest that fungibility is created through managerial action, rather than residing or not residing in the resources themself (Danneels, 2007; Gruber et al., 2012, 2013). We further refine and extend this latter view by showing that the degree of fungibility of a particular resource can change over time and hence managerial action is required to secure resource fungibility over time. For instance, human resources might generally be quite fungible, but our findings show that in-depth research experience (Leonard-Barton, 1992) or in-depth market experience (Gruber et al., 2013) can impact human resource fungibility by the way of a knowledge corridor. As our findings also show that a loss of fungibility might result in rigidities towards change in a resource-constrained context, we further highlight the importance of managerial attention and action to maintaining initial resource fungibility and securing prospective resource fungibility during resource (re)structuring in the early stages of a new venture's life.

Second, while we confirm the resource management framework's suggestion that resource accumulation is part of the resource (re)structuring process and find that process management tools assist in an efficient accumulation process, we go on to refine this suggestion by showing that the use of process management tools at the same time introduces rigidities towards further (re)structuring of these resources. The finding that a focus on management processes inducing efficiency simultaneously introduces rigidities is not new. It finds its origins in Abernathy and Utterback's (1978) observation that a focus on productivity gains inhibits firm flexibility and innovation ability, and has resulted in a large stream of scholars focusing on the efficiency versus flexibility paradox and ways to solve it (Benner & Tushman, 2003; Brown & Eisenhardt, 1997; Farjoun, 2010; Gibson & Birkinshaw, 2004). The underlying idea to the paradox is that process management tools are variation-reducing and therefore restrict the development of alternatives needed in turbulent environments (Benner & Tushman, 2003; Sitkin & Stickel, 1996). With this study we confirm the paradox, but go further to show that the rigidities introduced by process management tools already become prevalent in an early stage of the resource structuring process, *before* capabilities are formed. Process management tools speed up transformation of resources in capabilities, but also create rigidities, in the way that capabilities are formed in an inferior market segment or for an inferior unmet market need. Hence, not only capabilities itself lead to rigidities (Leonard-Barton, 1992), but rigidity-inducing process management tools can also result in a particular type of rigidities, hindering subsequent change. Management needs to take into account the rigidities that come along with these processes, especially since the solutions offered by extant literature to cope with the paradox, such as a structural (Tushman & OReilly, 1996), temporal (Tushman & Romanelli, 1985) or contextual (Gibson & Birkinshaw, 2004) separation of efficiency oriented and change oriented activities, are difficult to use in a resource-constrained environment.

Finally, the resource management perspective suggests that lower value resources are divested to provide slack and flexibility to acquire and accumulate resources with more value (Sirmon et al., 2007), implying that resource acquisition, accumulation and divestment are sub processes of the same resource structuring process, but are not necessarily interrelated. Our findings however show that the resources accumulated by Mobit (f.e. the proprietary technology platform) determine the resources that are acquired and divested. In the case of Mobit, the development of the proprietary technology platform resulted in path dependencies, which imprinted further resource structuring activities (Helfat & Raubitschek, 2000; Stuart & Podolny, 1996). Paradoxically, the fungible nature of the accumulated resources seem to reinforce the path dependencies resulting from them rather than breaking out from them, as suggested by Gruber, Heinemann, Brettel and Hungeling (2010). At Mobit, the proprietary technology platform was fungible enough to be implemented in another market segment and to address a slightly different unmet market need. This ultimately led management to choose to re-use parts of the technology platform instead of divesting. This path-dependency again resulted in rigidities to further changes. Hence, we contribute to the resource management framework by showing that the resource structuring subprocesses are no standalone processes, but are interrelated in the sense that previous resource structuring activities determine subsequent activities and can result in path-dependencies hindering further change.

4.5.3. Contributions to practice

Our findings suggest three key practical contributions. First, founder-managers of resource-constrained firms should pay attention to the notion of resource fungibility when making a transition from one business model to another. When they raise venture capital investment, apply for innovation grants, recruit personnel, develop a technology, form key partnerships, and so on, to implement a certain business model or pivot to a new on, they should be aware of the implications concerning flexibility. They should take into account that further business model pivots might be required and that the acquisition, accumulation and divesting of resources has a strong impact on the ability to do so successfully. As our case shows, founder-managers tend to underestimate rigidities introduced by reduced resource fungibility by assuming that they will be able to change directions easily without taking the resource implications into account.

Second, founder-managers often introduce process management tools to optimize the development of resources into capabilities. While the use of these tools can indeed increase efficiency in the accumulation of resources, it also introduces rigidities if further change is needed. In turbulent environments in particular, founder-managers should carefully evaluate the use of process management tools and the acquisition of specialized resource to accumulate resources as it might result in a loss of valuable flexibility. When operating in uncertain environments, which tend to change quickly, it might be better to consider alternative ways to support resource accumulation.

Third, founder-managers and their stakeholders should be aware about the importance of resource divestment to support business model pivoting, especially if resources are internally accumulated. Additionally, they should be aware about the chance of resource fungibility obscuring the need for resource divestment. When a new venture develops a technology for a given market, it might be tempted to rely on the technology and look for a new market segment in times of changing market conditions, rather than considering the development of a new technical solution for the initial market segment. Although this might look defensible, it is worthwhile to consider divesting the technology as an alternative as well. Especially in a resource-constrained context, resource divestment should be taken into account as a valuable resource restructuring process to support business model pivoting in new ventures.

4.6. Limitations and further research

As all papers, ours has limitations that provide opportunities for further research. First, to obtain rich insights we focused on one venture in one particular context. Further research needs to examine similar ventures in different contexts (for example different industry and/or different country). Certain particularities in our findings might be contingent upon the case under study, such as the particular difficulties to divest human resources because of country-specific contractual and legal obligations or the strong imprinting effect of previous experience on the fungibility of human resources. The investigation of similar firms in different contexts will allow accounting for these contingencies and further improve the robustness of the results. Second, we examined a venture that succeeded to implement one business model pivot, but then failed to make a second. We attributed the failure to a loss of resource fungibility as a result of managerial choices made during resource (re)structuring. While outlining resourcing frictions and managerial challenges that could not be overcome, our study does not conclude about ways to overcome them. Inspired by contemporary examples of entrepreneurial firms such as Twitter and Google, which were able to pivot their business model in the absence of fungible resources, we propose a form of bricolage as a way to overcome resourcing frictions. We however do not elaborate on this, as it is no part of our case material, but recommend further research to do so.

Third, the case under study was founded with a strong ambition to grow. This implies that process management tools and specialized resources play an important role, in order to support the growth trajectory. Further research about the relation between growth orientation and resourcing frictions is relevant, as it might be possible that ventures with lower or no growth ambition are more flexible and therefore can provide useful insights in ways to overcome the resourcing frictions identified in this study.

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Table 8: Description of the different business models

	Business Model 1: **CONSULTING MODEL**	**Business Model 2:** **MSP MODEL**	**Business Model 3:** **SAAS MODEL**
Market segment served	Early adopters of mobile websites (e.g. event organizers, media companies, operators, cities…) in Belgium and the Netherlands	The best performing (top 5) website development agencies in Belgium, the Netherlands and UK	Lower-end website developers in Belgium, the Netherlands and UK
Customer needs addressed	The need for an effective and complete mobile solution for desktop content, functional on many devices	The need for a technological solution to effectively transcode a large number of desktop websites to mobile versions	The need for a user-friendly technological solution to quickly develop simple, static, mobile websites
Product offered	A customized mobile website	A technology platform (the 'Composer')	A website development tool (the 'Mobilizer')
Resources deployed	*Human:* 3 software engineers and 1 administrator *Financial:* Founder money and grants *Technological:* Open source and research institute software *Social:* Founder's personal network	*Human:* 8 software engineers, 1 R&D software engineer, 2 account managers, a marketing manager, a product manager and a sales manager *Financial:* VC investment, convertible loan and innovation grants *Technological:* Transcoding proprietary technology platform *Social:* Personal network and formal alliances with leading web agents	*Human:* VP sales and user experience designer *Financial:* Innovation grant *Technological:* Transcoding technology toolbox *Social:* Personal network and collaboration with CMS providers

Table 9: Data overview

1. PARTICIPANT OBSERVATION NOTES (Jan 2008 – May 2010)				
Topic	***Period covered***	***Nr of meetings***	***Nr of pages***	***Audience***[1]
Management meetings	Dec 2007 – May 2010	58	60	I
BoD meetings	Dec 2008 – May 2010	17	20	I
Operations meetings	Jan 2009 – May 2010	33	35	I
Field notes	Dec 2007 – May 2010	/	+/- 450	P

2. INTERVIEWS (Sept 2010 – Dec 2011)				
Interviewer	***Interviewee***	***Duration***	***Date***	***Audience***
Participant observer	CEO	0:44:43	10/12/2010	P
Participant observer	COO	0:45:35	17/12/2010	P
Researcher2	CEO	1:28:41	16/02/2011	P
Researcher2	Software engineer 1	0:37:15	18/02/2011	P
Researcher2	CEO	0:35:42	25/02/2011	P
Researcher2	Software engineer 2	0:52:31	03/03/2011	P
Researcher2	Software engineer 3	0:48:56	15/03/2011	P
Researcher2	Software engineer 1	0:50:21	11/04/2011	P
Researcher2	Administrator	1:43:09	18/04/2011	P
Researcher2	CEO	0:43:16	06/05/2011	P
Researcher2	Marketing manager	0:47:12	06/05/2011	P
Researcher2	Administrator	0:59:02	11/05/2011	P
Researcher2	Software engineer 1	0:32:17	10/06/2011	P
Researcher2	Software engineer 3	0:29:13	10/06/2011	P
Researcher2	Software engineer 3	0:42:16	10/06/2011	P
Participant observer	Account manager 1	2:01:21	03/12/2011	P

3. INTERNAL RECORDS (Dec 2007 – May 2010)				
Type	***Author***	***Intended audience***	***Nr of pages***	***Audience***
Management meeting minutes	Administrator	Employees	42	I
Team meeting minutes	Administrator	Intended audience	240	I
Minutes of preparatory meetings for BoDs	CEO	All employees	78	I
BoD meeting minutes	CEO (later on COO)	Registered employees	35	I
Lead sales presentations, proposals & tenders	Software engineer 1 (later on product manager)	Potential customers	210	I & E

Business plan (BM2)	CEO	Prospective financial investors	41	I & E
Business plan (BM3)	COO	Investment committee	23	I
4. ARCHIVAL DATA (July 2007 – May 2010)				
Type	***Date***	***Intended Audience***	***Author***	***Audience***
Press releases (3)	07/2007,11/2008,05/2010	Public	Web	E
Press articles (2)	11/2008, 05/2010	Public	Factiva	E
PPT presentations	July 2007 – May 2010	Public / conference	Mobit	I & E
PR video's	July 2007 – July 2009	Public / conference	Mobit	I & E

[1] I = internal , E = external, P = personal

Table 10: Contrast table

<table>
<tr><td></td><td>TRANSITION 1
(July 2007 – Aug 2009)</td><td>TRANSITION 2
(Sept 2009 – April 2010)</td></tr>
<tr><td><u>Financial resources</u></td><td>1. Acquiring
Innovation Grants (374 K)
Venture Capital (750 K + 750 K + 1.5 mio + 1.5 mio)
Convertible Loan (300 K)

2. Accumulating
The use of cumulated revenues to attract external investors
Monitoring of cash through a BoD
Introductin of a financial planning and control system

3. Divesting
No</td><td>1. Acquiring
Grant (50 K)

2. Accumulating
Convincing investors to change current milestones and milestones for the 2nd 750 K

3. Divesting
No</td></tr>
<tr><td colspan="3">Key insights
1. Acquiring
More difficult to acquire financial resources during transition 2 compared to transition 1 since existing shareholders have to agree
2. Accumulating
Focus on development of milestones in transition 1 while focus on changing milestones in transition 2
3. Divesting
No explicit divestments in both transition 1 and 2</td></tr>
<tr><td><u>Human resources</u></td><td>1. Acquiring
11 new employees with specific profiles and at least 3 years of experience. Key positions were staffed by people with 5 – 10 years experience in a similar field

2. Accumulating
Implementation of job descriptions
Management of tasks through SPRINTs

3. Divesting
No dismissals related to the business model change. Two employees were fired because of significant underperformance and three employees left by themselves.</td><td>1. Acquiring
2 new employees. VP Sales and Marketing with 15 years of experience and one designer with 5 years experience (freelance)

2. Accumulating
Attempts to reallocate people to a different function

3. Divesting
Plan to lay off about 50% of HR with specific (redundant) skills, but never realized.</td></tr>
<tr><td colspan="3">Key insights
1. Acquiring
Recruitment of very specific profiles with experience in transition 1, less recruitment and more varied profiles with less experience in transition 2
2. Accumulating
Training of personnel for new tasks in both transitions
3. Divesting
No dismissals in both transitions to support the business model change.</td></tr>
</table>

<table>
<tr><td><u>Technological resources</u></td><td>1. Acquiring
Proprietary databases such as mobile phone specs

2. Accumulating
Development of proprietary software technology platform (composer) to transcode content oriented websites (10000 lines of coding), development of proprietary interface, documentation and additional features such as payment integration, video, geo-location…

3. Divesting
Open Source components</td><td>1. Acquiring
No

2. Accumulating
Re-orientation of the composer to a more user-friendly Mobilizer Integration with Joomla! Wordpress and Drupal

3. Divesting
No</td></tr>
<tr><td colspan="3">Key insights
1. Acquiring
Licensing and development of proprietary components at the expense of open source components during transition 1
2. Accumulating
Focus on technological novelty during transition 1, focus on user friendliness during transition 2
3. Divesting
Almost no divesting in transition 1 or 2. Although BM3 only uses 10% of the technology platform, platform development is continued</td></tr>
<tr><td><u>Social resources</u></td><td>1. Acquiring
4 formal alliances (the reference, QAT, Iminds, Mirabeau)

2. Accumulating
Use of personal network for recruitment, selling projects, access to funding
Use of formal alliances for recruitment, access to fairs and access to technology

3. Divesting
No</td><td>1. Acquiring
Collaborations with Joomla!, Drupal…

2. Accumulating
Use of personal network to recruit designer
Use of BoD to acquire resources (VP sales and marketing, product manager)

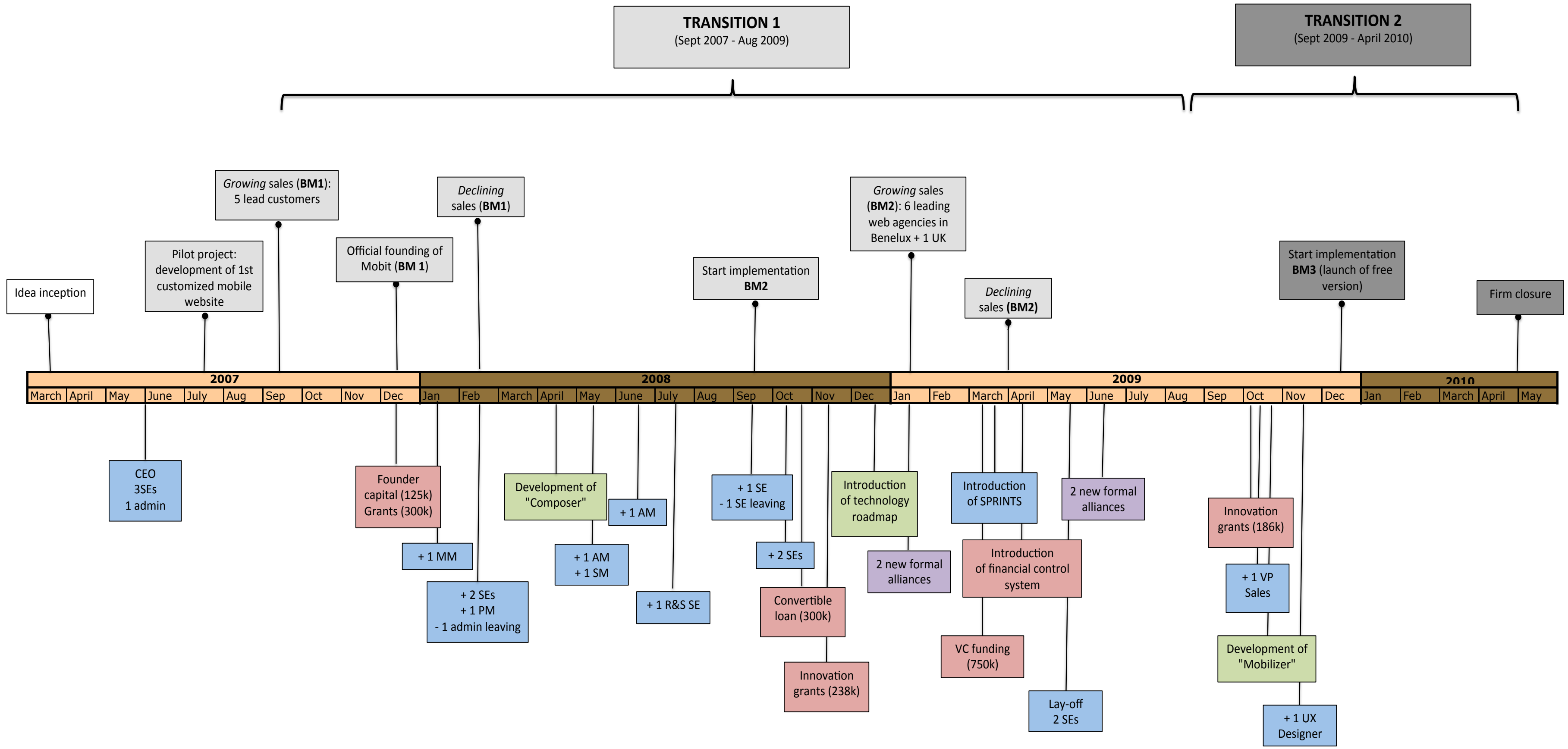
3. Divesting
No</td></tr>
<tr><td colspan="3">Key insights
1. Acquiring
Focus on formal alliances during transition 1, collaborations during transition 2
2. Accumulating
Use of personal network for recruitment, project selling and funding versus recruitment. Use of formal alliances for recruitment, access to fairs and technology versus recruitment. Exploitation of social resources much more pronounced during transition 1. Use of formal alliances for resource acquisition versus use of BoD for resource acquisition
3. Divesting
No divesting whatsoever</td></tr>
</table>

Table 11: Representative quotes

Frictions	**Representative quotes**
The lack of fungibility of newly acquired resources	**VC1:** « Our industry expert in the investment committee does not approve a change in milestones because he does not believe in M-Commerce to take off. » (BOD, April 2010) **VC3:** « We don't like the idea of you putting our money in a new project. Why don't you apply for an innovation grant? We need you to focus on accomplish your targets, not to develop new ideas. » (BOD, June 2009) **CEO:** « The local innovation grant finances 80% of a PhD at Mobit. The purpose of the PhD is to develop an automatic testing system of transcoded websites. The PhD will be monitored by a scientific committee, which consists of a professor and a technology advisor. Six monthly reporting is required. » (BOD, August, 2010) **VC3: «** We will condition our investment based upon you being able to find an experienced manager for the venture. Somebody who knows how to build a technology platform. But we will assist you in finding that person. We have a wide network in Belgian technology companies. » (Term Sheet meeting, September 2008) **COO: «** We need to continue to develop our technology platform. If we want to catch up with the App business, we will have to invest in our technology platform significantly. » (BOD, January 2010) **Account manager 1**: « If you give me three months more time, I am sure I will be able to realize my milestones. It is a question of time, nothing more… don't ask me to spend my time 'surfing on the Internet.' » (Management meeting preparing BOD December, 2009) **COO: «** Looking back, transcoding as an option to mobilize websites has a lot of disadvantages. It is good for static, non-interactive websites, but the world is moving to dynamic, interactive ones. For us, this implied that we had to explore technically complex solutions of embedding video content and all the fancy stuff that was easy to do in the world of Apps. We ended up in a technologically challenging and complicated platform that, in the end, could not deliver the same fancy stuff you could do in an app. » (Follow-up interview, December 2010).
The use of process management tools to support resource accumulation	**VC2:** « The change in milestones will need a new shareholders agreement at our fund. I will have to defend it though. It is not going to be easy to convince the representatives of the institutional investors. They have financial backgrounds and tend to question each change in direction. » (BOD, March 2010) **COO: «** I realize you want to have a prototype on-line by October, but I will show you the SPRINT planning. I am short of 4 FTE engineers. How can I allocate more time to the development of the new product if I am already running behind on the payment system asked for by our partners? » (BOD, September 2009).

	COO: « You realize that if you ask the product manager to help with the launch of the new product, the SEO of our website will be significantly delayed. He is taking a specific training for this. I am reluctant to change this. I would prefer that we allocate that task afterwards because I don't see how he can acquire the necessary skills otherwise. » (BOD, December 2009)
The lack of resource divestment	**CEO: «** In the Pocket, the new company lead by Louis Jonckheere, develops 'apps' for mobile purposes. He told me that our technology is far more effective and scalable than his billing by the hour. Our technology platform is that heart of our company. Any kind of pivoting should start from there. » (BOD, August 2009) **COO: «** We will re-train account manager 2 to commercialize our platform digitally. At this moment we cannot afford to loose her. She is senior, has credibility and firing her would be a very bad signal to the community of web developers. She has all the contacts. » (BOD, March 2010) **CEO: «** We can't afford firing half of our personnel. Then, we have to declare bankruptcy, as we have to pay 3 to 6 months of salary per person. We will just not replace the ones that leave themselves. Don't forget that we are liable as individuals for the salaries we need to pay when firing personnel. » (BOD, April 2010)

Figure 5: Timeline



3

GENERAL CONCLUSION

5. CONCLUSIONS

This doctoral dissertation had the overall aim to gain deeper insights into the resource management activities of new ventures in different stages of development. In order to achieve this aim, three studies were executed, each with a primary focus on a different stage of development. The first study investigated the characteristics and drivers of a new type of incubation model, particularly designed to aid the new venture in its seed resource management process. The second study focused on gaining legitimacy in order to acquire and maintain highly qualified human resources. The third study, finally, explored the relationship between business model pivots and resource management, early in a new venture's life. All three studies used a qualitative research design with interviews and participant observation as the primary data collection techniques. A multiple case study design was used for the first study (13 cases), while 2 single cases formed the basis of the second and third study. This final chapter summarizes the main findings of the three dissertation studies and highlights their key implications for both management science and practice. An outline of the limitations of these studies, which can serve as avenues for further research, is provided to conclude this doctoral dissertation.

5.1. Main findings

The first study investigates how accelerators operate as a new generation incubation model, how they differ from existing incubation models and how they impact their participants' development process. Through an inductive multiple case study of 13 accelerators in Europe an accelerator's key design parameters were identified. The data analysis uncovered five design elements and three design themes, which characterize and categorize the accelerator model. The five design elements – program package, strategic focus, selection process, funding structure and alumni relations – are the accelerator's key building blocks, describing the accelerator model and allowing to draw parallels and dissimilarities between different types of accelerators. The three design themes are the themes that discriminate three different groups of accelerators – the ecosystem developer, deal-flow maker and welfare stimulator – and represent the objectives of different types of shareholders. We find that the five design elements appear in each of the 13 cases and hence can be considered as the core building blocks of an accelerator. The accelerator's design theme is heavily related to the primary objective of the affiliated shareholder supporting or financing the accelerator. These objectives, respectively supporting the development of a corporate ecosystem, finding interesting investment opportunities, and stimulating welfare creation through increased start-up activity, are translated into the primary objective of the accelerator and represent the common theme that orchestrates the accelerator's design elements.

The second study reveals the way in which a new venture can gain legitimacy from an important but poorly addressed resource category, the employee. Through an in-depth case study of a successful, innovative start-up, internal legitimacy, i.e. the employee considering the organization as worthwhile to be committed to, is identified as the result of both founders' actions and employees' assessments. Through an intense investigation and observation of, on the one hand, the actions used by the founders to build legitimacy and, on the other hand, the criteria used by the employees to assess the venture's legitimacy, conclusions are made about the internal legitimacy building process. These conclusions involve the identification of different types of legitimation actions, with a different impact on the internal legitimacy ultimately obtained. We find that effective external legitimation mechanisms, such as conforming to established practices, highlighting familiarity, use of symbolic actions etc. do not necessarily work for employees. To build internal legitimacy, "goal congruence", i.e. the match between an employee's goals on one hand and the legitimation action's goals on the other hand, is key. The effectiveness of internal legitimation actions is therefore highly dependent on the intrinsic objectives of the employees to be part of the organization. Legitimation actions focusing on the employee's goals foster internal legitimacy, while legitimation actions that focus on other goals aren't. These findings suggest that neither the founders nor the employees dominate the internal legitimacy building process. Instead, both parties play an equal role and should equally be taken into account.

In the third study, the importance of understanding business model pivoting during new venture evolution is acknowledged and investigated. The study explores how new ventures can successfully pivot their business model in a resource-constrained context and identifies resource structuring processes that facilitate and inhibit business model pivots over time. Through a longitudinal case study of a particular venture that had to pivot its business model twice, conclusions are made about the boundary conditions of successful business model pivoting. As the venture under study succeeded in the first pivot, but eventually failed to perform the second, a comparison was made between the resource structuring processes supporting both pivots. The findings concern the identification of three frictions in the first resource structuring process of the company. These frictions are labelled "resourcing frictions" as they concern characteristics of a resource structuring process that hinder successful business model pivoting over time. The three resourcing frictions: (1) lack of fungibility of newly acquired resources, (2) the use of process management tools to support resource accumulation, and (3) the lack of resource divestment, are found to be inhibitors of successful business model pivoting in a resource-constrained context and have to be mitigated through appropriate managerial action in the absence of slack resources.

5.2. Implications for management science

The doctoral dissertation contributes to management science in different ways. First and most widely, it adds to *the entrepreneurship literature*. It does so by integrating theoretical frameworks and concepts from organization theory into the study of entrepreneurship. While organizational scholars have studied concepts such as organizational design (Greenwood & Hinings, 1988; Rivkin & Siggelkow, 2003; Schreyögg & Sydow, 2010; Siggelkow, 2001), organizational legitimacy (Aldrich & Fiol, 1994; Suchman, 1995; Zimmerman & Zeitz, 2002) and strategic change (Gilbert, 2006; Greenwood & Hinings, 1993) in established organizations, this doctoral dissertation addresses these concepts in an entrepreneurial context.

Second, within the entrepreneurship literature in general, the doctoral dissertation contributes to *the literature on new venture evolution* in particular. The way in which a new venture develops over time and manages its resources accordingly are fundamental mechanisms in the evolution process of new ventures (Hargadon & Douglas, 2001; Romme, 2003). As this doctoral dissertation uses case studies to explore these processes in-depth, it contributes to the literature on new venture evolution by providing detailed and differentiated insights about the micro-processes and boundary conditions underlying new venture evolution. Hereby, it provides considerable support for the need to treat new venture evolution as a multifaceted phenomenon (Ambos & Birkinshaw, 2010).

Third, the doctoral dissertation as a whole also contributes to *the resource management literature*. First, insights about how resource management activities evolve over time and about which resource management activities are salient in different stages of a new venture's life are particularly scant. This doctoral dissertation fills this void by investigating different resource management activities in detail, at different points in time. Hence, in its entirety, it provides insights about the different resource management activities that require particular attention during different stages of a new venture's life. Second, the resource management literature seems to assume a rather flexible resource structuring process in the earliest stages of new venture development and more rigid resource bundling and leveraging processes in later stages. Moreover, it easily assumes an overall abundance of resources or the availability of slack resources (Sirmon, Gove, & Hitt, 2008; Sirmon, Hitt, & Ireland, 2007; Sirmon, Hitt, Ireland, & Gilbert, 2011). By applying the resource management framework to new ventures in a resource-constrained context, this doctoral dissertation questions these assumptions and shows that rigidities can already be prevalent in the earliest stages of the resource structuring process. While resource management activities in later stages of development require tools that might introduce rigidities, literature needs to take into account that similar rigidities can already occur earlier in the development of a new venture.

Each study individually also has a major contribution to different streams of research, with primary contributions to the incubation, legitimacy and business model literature respectively. The primary contribution to *the incubation literature* concerns the introduction of the design lens as an adequate theoretical framework to study incubation models and their evolution. By introducing the activity system perspective as a structured framework to identify the key building blocks and underlying themes of incubation models, the first study addresses the recurrent request in incubation research to develop more theoretically grounded approaches (Bruneel, Ratinho, Clarysse, & Groen, 2012; Hackett & Dilts, 2004). It thereby paves the way to study incubation models and their evolution in a consistent and theoretically grounded way. Moreover, by delineating accelerators as a new generation incubation model, the first study also extends recognition of the nature of heterogeneity among incubation models.

The contribution to *the organizational legitimacy literature* primarily relates to the bridging of the actor- and audience-centred perspectives, currently prevailing separately in extant legitimacy literature. By showing that internal legitimacy is obtained only when the goals of both parties involved in the legitimacy process (actors and audiences) converge, the second study integrates both views and reacts against the habit of previous legitimacy studies to only focus on either of the two. A second contribution to the legitimacy literature involves the isolation of employees as a distinct stakeholder group to take into account in the legitimacy building process, thereby answering the explicit call of Uberbacher (2014) to study how legitimacy judgements differ among different types of audiences. While previous legitimacy studies focus on external stakeholders and highlight the importance to frame the venture in a familiar way and coincide with what's conventional in the industry, the findings of the second study point to different strategies, explicitly taking the goals of employees into account.

Finally, this doctoral dissertation contributes to *the business model literature*. First, it promotes the definition of a business model as the sum of three strategic decisions - related to the market segment served, the customer need addressed and the resources and capabilities deployed to produce the firm's offering - echoing Abell (1980) and later on Fauchart and Gruber (2011). With this, it clears the path to a comprehensive business model definition, linking business model development and change with resource management practices. Second, extant business model literature has either analyzed the business model concept as a static concept, primarily focussing on definitions and typologies (Amit &

Zott, 2001; George & Bock, 2011), or as a dynamic concept, focussing on business model change in established companies (Bock, Opsahl, George, & Gann, 2012; Doz & Kosonen, 2010) or business model innovations in existing industries (Bucherer, Eisert, & Gassmann, 2012; Chesbrough, 2010; Chesbrough & Rosenbloom, 2002). A dynamic view in a resource-constrained, new venture context however is lacking. The third study of this doctoral dissertation closes this gap, by extending theoretical insights about the factors hindering and enabling business model pivoting in a new venture context.

5.3. Implications for management practice

In addition to academic contributions, this doctoral dissertation has several implications for practice as well. The doctoral dissertation's insights are useful for different parties, including entrepreneurs, managers and employees, and are also relevant for policy makers to take into account.

As this doctoral dissertation seeks to answer the question of how resources can successfully be managed in a resource-constrained environment, its findings are particularly relevant for entrepreneurs who want to launch a growth-oriented venture in a context where resources are scarce. The doctoral dissertation's findings help entrepreneurs to identify the particular resource management activities they should focus on in different stages of their venture's development.

Prior to founding their business, it is worthwhile for entrepreneurs to consider incubation mechanisms, which can help them to figure out the best way to launch the business and increase potential access to required resources. As the findings of the first study demonstrate heterogeneity among different incubation models, it is important for nascent entrepreneurs to do their homework and learn about the different incubation mechanisms available to them. By taking into account and getting to know the particular design theme of an incubation model upfront, the entrepreneur can improve his/her chances to be admitted to the program that best fits his/her profile.

Once founded, the findings of the second study show the importance of gaining legitimacy to access required resources. In the process of legitimacy building, entrepreneurs and managers have a great deal to gain by explicitly taking into account 'the audience' they want to gain legitimacy from. If legitimacy from

employees is sought, it is important to be aware of the employees' primary goals and to go beyond traditional legitimation strategies to ensure a good fit with the organization's goals. On a similar note, the findings of the second study also have implications for employees, as they can help them to better understand the venture's legitimation actions and distinguish between symbolic and substantive actions.
Finally, once legitimacy is gained and growth is pursued, the findings of the third study become particularly relevant. As these findings highlight frictions in the resource structuring process, which might lead to failed business model changes, they can help entrepreneurs in preventing these frictions from occurring or identifying and addressing them ahead of time.

Lastly, the findings of this doctoral dissertation are also expected to provide useful insights and guidance to policymakers, especially for those policymakers who are tasked to develop a favourable policy towards new ventures with growth ambitions. Growth-oriented new ventures imply promising market potential and are assumed to hold the key for future competitiveness and prosperity of a nation. As the findings of this doctoral dissertation reveal the difficulties new ventures face in terms of attracting and managing resources, government bodies can use these insights to develop more focused support programs. In particular, the diversity of incubation models identified in the first study can help policy makers to more effectively evaluate different incubation models and choose the best models to support in their region. As the findings of this study also point to the accelerator as a promising new generation incubation model and reveal the model's primary building blocks, policymakers can use these insights to successfully support an accelerator or launch one themselves.

5.4. Limitations and avenues for further research

This doctoral dissertation has addressed a relevant issue within the domain of entrepreneurship in general and new venture evolution in particular. While the insights raised are interesting and contribute to management science and practice, they, as all studies, are not without limitations. This final section sets out to recognize and outline these limits, as they can stake out promising territory for future research.

First, this doctoral dissertation employs a qualitative research design. Although qualitative, case-based research facilitates rich insights, it also requires being tentative in generalizing the results. Additional research, focusing on different environmental settings and different types of firms would certainly be useful to further enhance our understanding of the generalizability of the results. This could be done by either using a qualitative research design, which includes additional cases with similar and different characteristics as the cases under study, or by using a quantitative research design, which focuses on linking new venture resource management activities with quantifiable variables such as number of employees, number of business model pivots, new venture survival rates, etc.

Second, this doctoral dissertation focuses on new ventures with a growth ambition. This implies that resources are required and searched for with the particular aim to support the development and expansion of the firm. However, not all new ventures are growth-oriented. A lot of entrepreneurs deliberately choose to grow their business organically without striving for quick or ongoing growth. For example, the primary aim of the so-called "lifestyle businesses" is to earn sufficient income to live the chosen lifestyle, which might not necessarily require venture growth. As it is plausible that new ventures with less or no growth ambitions manage their resources in a different way, an interesting avenue for further research remains to explore the impact of growth ambition on resource management in new ventures.

Third, the three studies of the doctoral dissertation explore the evolution of new ventures, younger than six years. While concepts and insights prevailing in studies about older, more established firms, such as capability development, strategy, organizational behavior, resource slack etc., served as the theoretical starting point to the analysis of this doctoral dissertation,it might be worthwhile to now do the same exercise, the other way around. Instead of investigating if the established concepts in extant literature about mature organizations hold in a new venture context, future research could close the loop by investigating if the concepts identified in this doctoral dissertation hold in a mature context.

Particular resource management activities discussed in this doctoral dissertation are salient to a new venture context, such as getting support from incubation mechanisms, acquiring legitimacy to overcome the liability of newness and bricolage as a resource structuring process to support business model pivots. These particular concepts provide opportunities for additional research, as it would be worthwhile to find out if they are viable for mature organizations of six years and older as well.

As a concluding comment, this doctoral dissertation provides a first step towards the aim of enhancing our current understanding of new venture evolution and resource management. Through the three doctoral studies, each focussing on resource management activities during a different stage of development in a new venture's life, I hope to have contributed to this aim and I hope to have opened the way for further promising research in this matter.

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